

DTIC FILE COPY

2

AD-A230 000



DTIC
ELECTE
DEC 26 1990
S D
Co

AN ASSESSMENT OF GRADUATED MOBILIZATION
RESPONSE

THESIS

Thomas A. Schneider, Captain, USAF

AFIT/GLM/LS/90S-50

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

DEPARTMENT OF THE AIR FORCE

AIR UNIVERSITY

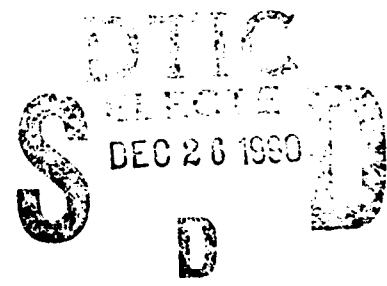
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

90 12 21 043

2

AFIT/GLM/LS/90S-50



AN ASSESSMENT OF GRADUATED MOBILIZATION
RESPONSE

THESIS

Thomas A. Schneider, Captain, USAF

AFIT/GLM/LS/90S-50

Approved for public release; distribution unlimited

The opinions and conclusions in this paper are those of the author and are not intended to represent the official position of the DOD, USAF, or any other government agency.



Approved for	
Signature	↓
Date	
Initials	
Comments	
Remarks	
Handwritten: A-1	

AFIT/GLM/LS/90S-50

AN ASSESSMENT OF GRADUATED MOBILIZATION RESPONSE

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Thomas A. Schneider, B.S.

Captain, USAF

September 1990

Approved for public release; distribution unlimited

Acknowledgements

I would like to thank my wife, Maria Alicia, for her patience and support. She understood the long hours involved with this research and encouraged me to concentrate on the research wholeheartedly.

In conducting this research I have had a great deal of help from others. I would like to thank the 16 mobilization experts listed in Appendix D. Their participation in interviews I conducted was crucial to the success of this research. Additional thanks is owed to Mr. Joe Muckerman, Dr. Jack Nunn, Mr. Jerry Peppers, and Mr. John Starns for the written materials they provided. I also wish to thank Mr. Joe Muckerman and Mr. Rod Vawter for reviewing the draft manuscript. Finally, I wish to extend a hearty thank you to my faculty advisor, Mr. Jerry Peppers, who provided the ideal level of support and direction.

Table of Contents

	Page
Acknowledgements	ii
List of Figures	v
List of Tables	vi
Abstract	vii
I. Introduction.	1
General Issue	1
Problem Statement	3
Investigative Questions	3
Scope of the Study	4
Justification	4
Limitations	5
Definitions	6
II. Methodology	8
Overview	8
Methodology	8
III. Factors Limiting U.S. Mobilization Potential.	12
Background	12
Industrial Structure	13
Foreign Competition	23
Leadtime	26
Raw Materials	28
Strategic Planning	30
Recap	32
IV. The Theory of Graduated Mobilization Response	34
Definition	34
Purpose	35
Assumptions	36
Organizational Roles and Responsibilities	36
Concept Exploration	37
GMR Continuum	37
GMR Coordinating System	42
Costed Option Packages	43
Early Recognition	45
The Three Stage Process	46
GMR Stage 3	46
GMR Stage 2	48
GMR Stage 1	49

	Page
Incremental Nature of GMR	50
DOD Participation	52
Industry Participation	53
History	54
 V. Findings and Analysis	 60
Introduction	60
The Interview	61
Interview Findings and Analysis	62
Topic 1: Historical Relevance	65
Topic 2: Strengths and Weaknesses of the Current Industrial Base	 74
Topic 3: Mobilization Planning	81
Topic 4: Graduated Mobilization Response (GMR)	 113
 VI. Conclusions and Recommendations	 157
Introduction	157
Answers to the Investigative Questions	157
Question One	157
Answer One	157
Question Two	159
Answer Two	159
Question Three	159
Answer Three	159
Question Four	160
Answer Four	160
Question Five	162
Answer Five	162
Conclusions	165
Recommendations for Further Research	166
 Appendix A: Acronyms and Abbreviations	 168
Appendix B: Key Definitions	169
Appendix C: Telephone Interview	170
Appendix D: List of Respondents	197
Bibliography	200
Vita	203

List of Figures

Figure	Page
1. One Version of the Conflict Spectrum	40
2. Standard Elements of a Costed Option Package . .	44
3. Scope of Traditional Mobilization Activity vs Scope of GMR Activity	46
4. GMR Stages and Levels	47
5. Relationship of GMR Stages to DOD Systems . . .	53

List of Tables

Table	Page
1. Waiting Time for Typical Aerospace Items	27
2. Engine Metals Usage & Metals Stockpile Availability	29
3. Primary Federal Agencies/Departments Involved with GMR	38
4. Primary Department of Defense Organizations Involved with GMR	39
5. Likert Responses from the Research Interview	63
6. Rank Order Responses from the Research Interview	64
7. Rank Order Responses for Question 1 C	67
8. Rank Order Responses for Question 2 C	79
9. Rank Order Responses for Question 4 O	139
10. Rank Order Responses for Question 4 P	142

Abstract

This study assessed the viability of the concept of Graduated Mobilization Response (GMR). Areas of interest included: identification of key differences between GMR and previous mobilization policy; the strengths and weaknesses of GMR; the validity of GMR; impediments to the implementation of GMR; and the current status of GMR. A literature search revealed the theory of GMR, factors limiting U.S. mobilization potential, and how GMR counters those limiting factors. An extensive telephone interview was conducted with a total of 16 mobilization experts from U.S. Government agencies/departments and research organizations. The interview garnered the respondent's views on four topic areas: 1)The relevance of past mobilization efforts 2)The strengths and weaknesses of the current industrial base 3)The direction of future mobilization planning and 4)GMR. A large majority (87%) felt the concept of a GMR is a valid way to improve U.S. mobilization preparedness. The details of the concept have, however, held up the development of GMR. Apparent agreement on the details of costed option packages has recently removed a major roadblock to continuing development. The successful integration of GMR into mobilization planning will be commensurate with the priority mobilization is given in the national deterrent/response strategy.

AN ASSESSMENT OF GRADUATED MOBILIZATION RESPONSE

I. Introduction

General Issue

Since World War I, the United States and its allies have relied heavily on U.S. industrial capacity to support military and defense needs. The ability of U.S. industry to fulfill those needs has at times been surpassed by demand. Mobilization is government directed involvement of private sector industry in the direct production of war materials or indirect support of war materials. Three times in the last 73 years the U.S. has "mobilized" its industrial capacity to meet surges in demand: during World War I, World War II, and the Korean war. As will later be discussed, not since World War II has the U.S. fully mobilized. As the years pass, the ability of the U.S. industry to meet a sudden increase in military demand is becoming more and more questionable.

Wartime mobilization capability has been negatively affected over the last several decades by: declines in the components of U.S. industry, limited raw materials, increasing foreign competition, and increasingly longer lead times. A further complicating factor is that mobilization planning has not been given a strong emphasis at the

national and/or military service levels (1:12). U.S. industrial firms cannot do this planning on their own; nor can they afford to sustain readiness capability on their own. Both planning and financial support from the Federal Government are necessary in conjunction with cooperative industrial participation. To help counter these weaknesses, in 1987 the National Security Advisor to the President made development of a mobilization doctrine and system, based on a graduated response to early warning, one of the seven priority National Security Emergency Preparedness (NSEP) goals to be achieved by 1989 (30:ii). The telephone interviews conducted in the course of this thesis clearly indicate that the graduated response goal has not been achieved.

The current U.S. Government approach to industrial mobilization is essentially all or nothing. With this approach mobilization is seen as a massive step to be taken only after a clear indication of all-out war. By the time the clear indication becomes evident, hostilities will very likely be imminent or under way! Our ability to wage war is already constrained by a declining industrial base. Failure to mobilize the industrial base as soon as conflict appears possible, will further limit our ability to fight and may lead to the demise of our government and society.

Problem Statement

The U.S. Government does not have a comprehensive, fully integrated mobilization system. The hodge podge of government programs and legislation, some dating back over 70 years, is inadequate for an effective national mobilization response. The concept of Graduated Mobilization Response (GMR) was conceived as an important first step toward improving the mobilization foundation (19:6). GMR is an incremental mobilization program which readies private sector industrial organizations for participation in direct war material production or indirect support of that production. Development of a GMR doctrine and system is still in its infancy and will not be completed for years to come, if ever. The 1989 NSEP goal has not been reached. The principles of GMR policy and how it can be successfully implemented are not clearly spelled out. To help speed development and understanding of the policy, this thesis consolidates both background material and the most current thoughts on GMR.

Investigative Questions

The following investigative questions guided this thesis research:

1. How is GMR different from previous mobilization policy?
2. What are the strengths of the GMR concept?
3. What are the weaknesses of the GMR concept?

4. Is GMR a valid way to improve the mobilization posture/capability of the United States?
5. What are the impediments to GMR implementation?

Scope of the Study

Initially, this thesis examined the broad concepts of mobilization and Graduated Mobilization Response (GMR). A preliminary understanding of what constitutes "mobilization" is necessary before addressing the narrower area of GMR. By addressing the investigative questions on pages 3 and 4, this thesis clarifies what GMR is, why it was created, and who is involved in its development and operation. Next, this thesis narrows its perspective by examining the implementation of GMR; when should it be implemented and how should it be implemented. The procedures used in conducting this research are outlined in Chapter 2, Methodology.

Many aspects of industrial mobilization deserve further study. The topic of GMR was chosen because of its possible impact on the development of a new national mobilization policy. GMR could become a key element in our National Deterrent Strategy. Results of this study may benefit all the armed forces through a re-statement of, and strengthening of, industrial preparedness concepts in the United States.

Justification

It would be difficult in the early 1990s for the United States to support a war on the same scale as Vietnam without

a major mobilization effort (1:12). GMR was conceptualized as a more logical approach to mobilization than we have used in the past. However, GMR has not gotten past the concept stage. GMR needs to be analyzed as a force multiplier, especially in light of pending defense reductions in dollars, manpower, equipment, and facilities. This thesis attempted to resolve the who, what, when, why, and how of GMR; and to determine if GMR has the potential to increase U.S. ability to fight, if necessary. The director of the Mobilization Concepts Development Center (National Defense University), Robert L. Butterworth, states "Wide dissemination and informed debate can only raise the credibility of GMR as it is suffused throughout the government" (30:cover letter).

Limitations

This thesis examined the concept of GMR. The theory of GMR, as well as its strengths and weaknesses, were identified through a process that included a literature review and interviews of experts. Although this research was extensive, it is by no means exhaustive. Numerous government agencies, departments, work groups, etc. conduct untold and unpublished GMR related business. What emerges for the reader is a general understanding of the need for GMR in the realm of industrial mobilization, the ideas it encompasses, and its status today. Although the full concept of GMR includes all types of resource mobilization,

only concerns directly related to industrial mobilization were within the scope of this thesis. Notably, personnel mobilization and the Personnel Conditions (PERSCONS) were not addressed.

Successful implementation of GMR will largely be dependent on involvement of the private sector, most likely through the contractual process. Because GMR policy has not been fully formulated, few contracting officers, program managers, or private sector firms are even aware of the concept of GMR. Because of this lack of awareness, private sector potential interest and cooperation cannot be determined accurately at this time. The findings are largely based on theoretical concept exploration from the literature review, and the opinions of interviewed government experts in the area of mobilization. The findings clearly indicate that governmental planners have to determine many fundamental groundrules before the GMR concept can be adapted for practical application under "real world" restrictions and concerns.

Definitions

All acronyms will be described and spelled out the first time they are used, and the acronyms will appear in parenthesis. A list of acronyms and abbreviations can be found in Appendix A. Definitions of key terms can be found in Appendix B.

One key term requires special emphasis. Throughout the text Graduated Mobilization Response (GMR) is used. GMR is an incremental mobilization program which readies private sector industry for participation in, or the recovery from, a National Emergency. For the purpose of this thesis, GMR most often refers to wartime preparation/participation (i.e. direct war material production, or indirect support of that production). The concept of GMR for the private sector is similar to the use of the war readiness, incremental defense condition (DEFCONs), for the military. According to a recent study,

[GMR] would operate in parallel with the DEFCON system that the armed forces use. Each change in the [GMR] would put a number of planned actions into effect for the private sector and U.S. Government controlling agencies, just as a DEFCON change does for the military. (1:12)

When first originated in the mid-1980s, the GMR concept was termed Industrial Readiness Conditions (INDCONs or INCONs). The INDCON concept has a slightly more restrictive meaning than GMR. Use of the INDCON term was discontinued in 1988, but is still found in the literature written before that time. The INDCON concept is the foundation of GMR. The term GMR was substituted for INDCON throughout this thesis, except where a comparison of the two notions was made.

II. Methodology

Overview

The investigative questions listed in Chapter 1 were developed to cover GMR from its inception to its present state. A four step process was used to answer the investigative questions. The first step was a thorough literature review. The second step was conducting semi-structured interviews. The third step was interpretation and validation of the interviews. The fourth step was synthesizing the literature review information and interview results.

Methodology

Each step required the specific action listed below:

a. STEP 1 - The literature review required searches through the Defense Technical Information Center (DTIC) and Defense Logistics Studies Information Exchange (DELSIE). The literature review also investigated government legislation, DOD policies and regulations, and the general literature on national policy/industrial readiness.

b. STEP 2 - Based on the literature review, the initial investigative questions were altered or expanded as necessary to develop interview questions. Interviews were conducted with acknowledged "experts" in the area of mobilization. The experts consisted of: 1) Authors who were identified via the literature review. 2) The most

knowledgeable representatives of "major" government agencies involved with the planning and/or execution of GMR. The definition of "major" was based on the literature review.

3) Additional sources referred to me by the experts in category 1) and 2) above. The interview covered the structured questions, but also allowed the expert to offer additional clarifying information. Each expert was interviewed extensively at least one time. Clarifying and follow-on questions were asked in a second interview when necessary. The interview questions were mailed to the interviewees prior to the interviews in order to allow them to research the answers. Research showed the number of experts to be quite small; 16 experts were contacted and interviewed.

The telephone was used for interviews because the experts are located almost exclusively in the Washington D.C. area. Telephone conversations varied from 30 minutes to 120 minutes, and averaged 60 minutes in duration. Interview times were set up at the convenience of the interviewee.

The interviewer remained conscious of the possibility for bias. Bias was minimized through:

- 1) Having questions reviewed by peers and faculty prior to the first interview.
- 2) Practicing the interview with peers and faculty.
- 3) Avoiding "leading" questions during probing.
- 4) Using the same carefully chosen words with each interview (including having a written explanation of the purpose and process of the research).

c. STEP 3 - The results of the interviews were categorized when meaningful. All questions are discussed and analyzed in Chapter 5. Both majority and minority opinions are discussed and analyzed. In the cases where follow-up interviews were required, the experts were asked to clarify their position or asked to support or reject the validity of the interview responses. Follow-on questions that the first interviews spawned were also asked. Follow-up interviews were categorized in the same manner as the first set of interviews and incorporated into the responses/results as appropriate.

d. STEP 4 - The results of the literature review and the interviews were synthesized into a single document which meets the objective of the problem statement. This document was sent to Mr. Joe Muckerman from the Office of the Under Secretary of Defense for Policy, and Mr. Rod Vawter from the Office of Industrial Base Assessment, for suggested changes. Suggested changes were validated, when necessary, through additional interviews and/or literature review and incorporated into the document.

The exploratory nature of GMR was effectively handled by a combined literature review and semi-structured interview process. Because GMR is still largely conceptual, much of the necessary information has not been published and must be obtained from the people directly involved. Authors Michael Wallzer and Paul Wienir relate:

The semi-structured interview will allow exploration of areas where specific questions are difficult to construct, and will allow the use of probing questions. Additional advantages of the technique include its flexibility, moderate cost, and high response rate. (36:290)

III. Factors Limiting U.S. Mobilization Potential

Background

The United States defense industrial base consists of all contractors who produce Department of Defense war materials (from boots to aircraft carriers). During wartime, the defense industrial base definition expands to include the entire industrial capability of the United States.

"In a conflict requiring rapid mobilization of the armed forces, there will be a consequential need to mobilize the industrial base to sustain the fighting forces" (20:26).

Mobilizing industry is putting it on a "war footing."

How well our fighting forces will be sustained in the future clearly depends on our attitude toward industrial mobilization today. How quickly the industrial base will be able to produce the required machinery of war depends on what we do to maintain our industrial base now. (20:26)

By many accounts the industrial base is dangerously inadequate (21:89; 1:i).

This background section examines recently published material concerning the reasons the U.S. defense industry base cannot support Department of Defense (DOD) wartime requirements. Although the sampled sources do not agree on every issue, the analyzed articles do agree the U.S. defense industrial base cannot fully support DOD needs. This chapter examines the factors commonly identified in current literature as the primary weaknesses in our mobilization capability. Industrial structure will be examined first,

followed by foreign competition, leadtime, raw materials, and strategic planning.

Industrial Structure

During World War II, the U.S. was termed "the Arsenal of Democracy." For example, the U.S. produced 296,000 aircraft, 1,200 major naval vessels, and 86,000 tanks. But that was almost fifty years ago. When the war ended most industries quickly reverted to peacetime production. Over the last four and a half decades, key industries such as ship construction, steel, ammunition, and machine tools became only shadows of what they once were. Their supporting labor pools also diminished accordingly.

The industrial base that was built to support and sustain the armed forces in World War II is gone. The current defense industrial base as it presently exists is inadequate to a dangerous extent. (1:1)

During the last thirty years, the United States has become a postindustrial society. "The U.S. has been diverting resources into service and information management industries at the expense of basic industry" (20:26). In the aftermath of World War II, the U.S. was the only world power to emerge virtually unscathed in terms of industrial strength. The U.S. was able to quickly convert from 'guns to butter' and filled the void in world-wide consumer production capability. As the major combatants recovered, and the third world countries developed, the U.S. share of world consumer supply decreased. This occurred slowly at first but the pace quickened in the 1960s through the 1980s.

Due largely to significantly lower wage rates, it became cheaper to manufacture overseas. Accordingly, production of shipping, steel, automobiles, electronics, etc., increased overseas and decreased in the United States. As much of the manufacturing base transferred or developed overseas, the United States concentrated on the demand for services and information management. The resulting decline of U.S. manufacturing has had a major impact on the U.S. ability to mobilize its military support. The U.S. industrial base has been the foundation of free world defenses for the past 45 years. Its weakening reflects a decrease in U.S. world pre-eminence and freedom of action (21:89-90).

According to An Assessment Of The United States Industrial Base, published by the Aerospace Education Foundation, it would take a minimum of eighteen months to expand production to meet wartime mobilization requirements. That is, eighteen months to gear-up the defense industry to today's wartime needs! There simply is very little capability to surge (i.e. speed-up) the production of currently contracted items due to limited production facilities, limited sub-contractor sources, long leadtimes, etc.. It will take at least 18 months to convert and train commercial facilities to begin filling the void between demand and supply. In some cases, entirely new plants will have to be built. But U.S. military projections for an all-out war show NATO forces running out of certain supplies in as little as two weeks. The same assessment stated:

Industry cannot keep pace with demand.
Unfortunately, it is impossible to surge the output
of even the most important weapons and war material
much faster than eighteen months. (1:12)

Two examples will serve to illustrate the point. First,
in 1973 the D.O.D. asked the producers of the M-60 Battle
Tank to increase production from 30 to 100 tanks per month
to make up for Israeli tank losses in the Yom Kippur War.
Production was increased 10 tanks per month but that was
all. There were only four foundries in the entire United
States capable of turning out tank turrets and hulls and
heavy commercial demand limited maximum production to 40
tanks per month (25:8). As a comparison, there are only
three foundries capable of producing today's M-1 Tank. The
days of WW II mass production are clearly gone. A more
current example involves the fairly small scale 1982
Falklands War. That small scale war rapidly depleted Great
Britain's supply of AIM-9 missiles. The U.S. supplied AIM-
9s from its war reserves because Raytheon, the manufacturer,
could not and did not increase production for months. Had
the war continued for much longer, the U.S. war reserves
would have dropped to a critical level. The current
domestic defense industry has difficulty meeting peacetime,
let alone wartime, defense needs. Of those items and
components deemed militarily critical, only about half could
be surged at the same time (12:30).

Low peacetime usage rates do not encourage creating or
sustaining production facilities with rapid expansion

capability. Better uses for corporate capital, and the risk of obsolescence, normally outweigh the potential value of excess capacity. When the government requests rapid or large scale increases in production, industry usually requires new people, machine tools, and facilities. Even with a high priority assigned to a particular increase, people can only be trained at a certain pace; machine tools can only be produced at a certain rate; and facilities can only be designed and built at a certain speed. The increase in raw materials needed and/or component requirements required will also be a bottleneck. The more complex the system, the harder the surge. The more systems you try to speed up, the greater the competition between those systems for the same scarce resources. Some critical components, like precision glass used in weapons systems, comes from only one U.S. supplier (6:109) so the base you're trying to expand is extremely limited.

In addition to the problem of a shortage of basic industry in the United States, many firms have consciously eliminated their ability to create DOD goods. Honeywell and Fairchild are examples of important defense oriented firms which are getting out of defense production (32:89). In their article, Leadtime Zero Revisited, Fowler and Friga state:

Congress and DOD now realize the amount of conflicting regulatory direction is staggering and outdated, especially during crises or war. The laws, policies, and procedures for acquisition are

based on and meant for peacetime with no allowance for leadtime reduction during crises or war. (12:28).

The primary example cited by Fowler and Friga is the Federal Acquisition Regulations, which emphasize cost and technical contractual requirements to such a degree the acquisition process loses all flexibility. In effect, The process is more important than the product. Many firms would prefer not to do business with the government rather than take on the increased costs and time requirements involved with regulatory compliance (12:28). A prime example is LTV which at one time was an aircraft industry leader with its development of the A-7 aircraft. LTV consciously decided to avoid being a prime contractor, at least in part, because of the complexity of dealing directly with the government. Unfortunately for LTV, it has not found sufficient work as a subcontractor. Combining this with losses experienced on their portion of the B-2, C-17, and YA-7F programs, you have a profile of a defense industry firm going bankrupt. When laws, policies, and regulations drive defense producers out of the defense business they further compound our growing inability to produce wartime goods.

The effect of profitability on industrial capacity is the most controversial element discovered in the literature. Much of this controversy has its basis in "...business operations between the defense industry and the U.S. Government deviate widely from conventional free market theory" (24:463). Free market theory states the equilibrium

price of a good is determined by supply and demand. In a perfectly competitive market (which is only a theoretical construct) no one buyer or seller is powerful enough to influence the market price. While the assumptions of a perfectly competitive market do not fully apply to the actual market, they do prove very useful in understanding pricing in much of the U.S. economy. The assumptions of a perfectly competitive market apply even less to the defense industry than to other sectors of the U.S. economy. It is important to realize that the defense industry is a cost-based business that sells to a single customer. That single customer, in this case the U.S. Government, has a great influence on the market price. This market arrangement, termed a monopsony, operates under different assumptions from a perfectly competitive price-based market (32:31). One of the most important of those assumptions is the customer can have whatever he wants, but he must be willing to adequately reimburse for the services rendered. If the customer doesn't adequately reimburse, he is only hurting himself in the long run by decreasing the number of firms willing to do business with him.

Defense industry spokesmen often state that doing business with the DOD is not always profitable. Part of the reason, as stated above, is the myriad of complicated rules and regulations that leads to increase overhead. Meeting government specifications often results in barriers that prevent the use of the best technology (3:43). An example

of this from one of Chapter 5's interviews involves picture tubes for helicopter borne night vision systems. The DOD requires black and white picture tubes, but they are the only customer in the entire U.S. for those tubes. The manufacturer could provide color picture tubes with higher resolution at half the price of the black and white tubes. The government isn't interested because color tubes don't fit in with the instruction/repair manuals. Another reason doing business with the government is not always profitable is the lack of stability in demand resulting from the competitive bidding process. There are no guarantees of work. The sporadic demand creates uncertainty for both the employer and employee alike. Many firms have left the defense industrial base for the higher profits of consumer goods. Many defense industry firms are just getting by from contract to contract. Some have gone out of business. For instance, in 1988 alone approximately 4,000 small defense firms went bankrupt (3:47). Because of low profitability, firms in the defense industry seldom have overcapacity and often have less than ideal production techniques (1:15). Much of the capital equipment used is archaic; the 30 year old equipment results in an overreliance on labor and commercially unacceptable levels of waste. Economic Lot Quantity, Just-In-Time (JIT) supply, worker participation, automation, and other such production/management techniques are not used and there is little incentive for the producers to modernize to 1990's standards. Maintaining a workforce

of 4000 people might result in the fastest completion of a contract, but a prime contractor will hesitate to hire and train that many if he knows he will have to layoff most of them in the near future. As an example, even if the lowest production cost per unit is achieved at an output of 10 aircraft per month, the manufacturer will produce at a rate at which he can keep a steady workforce employed through the length of the allowable contract term. This figure might be 5 aircraft per month. This drives up both the actual per unit costs to the government and the opportunity costs to the manufacturer. Stretchouts (i.e. the buying of fewer systems per year) based on government funding changes further exacerbate the problem. According to Gansler,

During the Reagan buildup, over half of the 40 largest weapon programs were purchasing weapons in numbers below the minimum requirements for economically efficient rates. (13:177)

Unless the manufacturer has other contracts lined up, he'll accept the lower profits (at least in the short term) in order to stay in business. In the long term, the manufacturer will try to produce in a market which ensures adequate return on investment. IBM, Allied Signal, and Eaton Corporation are among the many firms reducing the risk of inadequate return by not entering competitions in which they are qualified (13:256).

Economist G. R. Simonson considers the low profitability industry position to be based on seriously misrepresented data. He stated "...defense contractors received a return

on defense capital far above that of other nondefense producers of durable goods" (26:47). Since the defense industry is currently labor intensive, a higher return on capital might be expected. His statements are not without detractors. Another measure of profitability is return on sales. James Blackwell in his article, Defense in Decay, states:

Profit margins, in terms of returns on sales, were about the same in the defense sectors during the 1980s as in manufacturing as a whole. The defense industrial base average was 4.9 percent in 1980 and 3.8 percent in 1986, although the U.S. manufacturing sectors earned 4.9 percent in 1980 and 3.7 percent in 1986. (7:39)

Although Blackwell's return on sales is of some interest, the standard measure of profitability accepted by economists is return on capital. The actual effect profits have on capability is not clearly identifiable based on the literature reviewed. One of the main reasons for this is the relative paucity of hard data on both commercial and defense industries as a whole. While individual firms are of interest, it is the industrial sectors as a whole that are crucial to determining the health of the industry. The loss of a particular firm will be of little consequence in a healthy industrial sector comprised of numerous competitors. The loss of a particular firm in an industrial sector with few competitors may be quite another story. What is clear is that according to the Center for Strategic and International studies:

More than 80,000 of the 118,000 firms that provided goods to the Pentagon in 1982 had by 1987 fled to the civilian world or gone out of business - even though defense spending soared during that period. (3:43)

In his article on the same subject, John Terino states that takeovers, mergers, and acquisitions have not negatively impacted the defense industrial base (33:46). Very little if any capability has been lost, the tendency has been toward the merging of firms with retention of their assets. Recent restructuring has been based on natural market forces (7:39). However, the trend over the next few years will include more mergers and considerable restructuring. John Rittenhouse, Senior Vice-President, GE Aerospace, predicts that even strong companies will be reducing their capacities considerably but the major defense contractors will not move into the civil marketplace because of the significant defense industry exit barriers (32:31). Those exit barriers include:

- Reliance on government research and development
- Large overhead
- Specialized equipment
- Specialized labor
- Specialized marketing
- Reliance on military specifications
- Reflection on the company image (31)

Ultimately, the health of the defense industrial base is only a reflection of the industrial base as a whole. While DOD can, to a limited extent, affect the structure and practices of the defense industry, it cannot affect the weaknesses of the industrial base as a whole.

Foreign Competition

Many of our major military systems require foreign components. For example, Japan produces the semiconductor chips required in our M-1 tank, F-16 Falcon, F/A-18 Hornet, and global positioning and defense satellites, among others. If cut off from Japan, our industries would currently run out of chips within as little as two months (1:17). There are no U.S. sources for these critical computer chips. Examples of other foreign supplied items include:

Quartz fibers, bearings, fasteners, precision optics, and machine tools. Also on the list is an essential ingredient for the atropine syrettes issued to troops for use in case of nerve-gas attack. Belladonna, an essential ingredient in the compound, comes from a sole foreign source: Bulgaria. (6:109)

Some experts consider the U.S. reliance on foreign sources as a dangerous constraint to unilateral U.S. activity, but there is not consensus on the matter.

Analysts argue, on the one hand, that 'foreign sourcing' is either one of the gravest threats facing the U.S. defense industry today or, alternatively, that it is an unavoidable and healthy outgrowth of the ongoing globalization of the economy. In either case, the United States must make plans to deal with the possibility of losing foreign sources at a critical point. It is hard to argue that the United States not do something to protect itself from being hamstrung at a crucial moment, but the question is how far should, or can, the U.S. Government go to protect itself? (1:17)

Defense production interests Congresswoman Mary Rose Oakar concurs with the experts, "Based on testimony that was not just from special interests, we cannot rely on [foreign sources]" (8:43). Foreign penetration of the U.S. defense

industrial base may decrease the number of U.S. producers, and cause a decrease in the U.S. lead in key technologies (7:40).

A partial solution quickly comes to mind but it is tantamount to government interference in the "free" market place and would be expensive. Fowler and Friga, in their article Leadtime Zero Revisited, suggest having one onshore supplier capable of making each militarily critical system, item, and component as perhaps the best hedge for time. This is not protectionistic but, rather, pragmatic and a capability we must allow for (12:30).

The Defense Department acknowledges concern about our foreign dependence. But the Pentagon '...does not know the extent to which foreign-sourced parts and components are incorporated in the systems it acquires' nor do they have a 'reliable system even to identify such dependencies, not to mention systems to minimize them' (1:1). Each military service has a separate database to meet its perceived needs. Updated information is kept only on firms under current contract. The information, with only a few test studies, does not extend below the prime contractor level. The service databases are not integrated and do not contain standardized information. The Office of Industrial Base Assessment is attempting to track foreign dependence through a multi-service database called the Defense Industrial Network (DINET). From 1985 through 1989, \$1.4 million has been spent on the DINET system, but the Government

Accounting Office estimates that an additional \$5.6 million to \$27.6 million dollars will be required for a fully capable system (6:109). Before definitive action can be taken to correct foreign dependency problems, the scope of the dependency will have to be determined. Until DINET and/or additional studies are completed, the government will not have the ability to determine where to place the most recovery and protection emphasis.

As defined by the U.S. Department of Commerce, the Defense Department relies on approximately 215 of the thousand odd industrial sectors of the U.S. economy. Examples of these sectors include aerospace, shipbuilding, and munitions. Data from the 1980s is available for 122 of the 215 defense related sectors. From 1980 to 1986 foreign dependency increased in 104 of the 122 sectors for which information was available (7:40). "In 1980, and again in 1986, 52 critical defense sectors had import penetration greater than U.S. manufacturing as a whole" (7:40). Insufficient information is available on 93 of the sectors, but the penetration rate may apply to them as well.

Dependency by its very definition implies the ability to be influenced. While all foreign dependency is not necessarily bad, it is important to realize that U.S. ability to act unilaterally is decreased by the amount others can influence U.S. actions. For example, if Japan vehemently disagreed with our "aggression" in a world situation, they could decide to sell the most advanced

Dynamic Random Access Memory chips (which only Japan makes) to the Soviets. At the same time, they might stop selling them to the U.S. The entire balance of power could shift. Although this is an extreme example, it points out how foreign dependence can have broader implications than is often realized. For the U.S. to retain Superpower status it must retain a large degree of independence.

Leadtime

Leadtime (or waiting time) for individual components have steadily increased over the last several decades. The combination of the factors listed in the next paragraph has in some cases meant waiting time for components of military systems has skyrocketed. Aircraft subsystems like radar, avionics, wings, and landing gear all require a leadtime of two years or more (1:3). We cannot produce an aircraft today to replace one shot down yesterday! U.S. industry cannot react quickly to our military needs.

Table 1 shows the waiting time for typical aerospace items as of 1988. Increases in leadtime became a serious problem in the mid-1970s. In 1973 landing gear leadtime was approximately 15 months, in 1977 it was 21 months, in 1988 it was 28 months (14:66)! From 1977 to 1980 the leadtime for traveling wave tubes doubled, leadtime for forgings sextupled (9:117)! In 1975, the leadtime for bearings was approximately 4 months, in 1988 it was 7 months (13:66).

The trend in almost all components has been increasing leadtimes.

TABLE 1
WAITING TIME FOR TYPICAL AEROSPACE ITEMS (1:3)

<u>ENGINES</u>	<u>MONTHS</u>	<u>WEAPONS</u>	<u>MONTHS</u>	<u>AIRCRAFT</u>	<u>MONTHS</u>
Fuel controls	24	Actuators	25	Aux. power units	27
Gear boxes	20	Radomes	21	Radar	27
Bearings	23	Traveling wave tubes	20	Avionics	24
Disks	20	Servos	19	Landing gear	28
Fan blades	19	Microcircuits	19	Wheels & brakes	21
Pumps	16	Harness	18	Nacelles	21
Forgings	13	Warhead	14	Wings	27
Airfoils	13	Castings	7	Actuators	21
Castings	9	Bearings	7	Empennage	29
				Castings	10
				Forgings	15
				Ejection seats	13

The prime reasons for the increase in leadtime cited in a 1981 Defense Science Board report remain valid today:

1. Raw materials shortages.
2. Inadequate capacity and large backlogs in specialty metals fabrication.
3. Small buys of electronic components.
4. Very limited sources for specialty items such as optical components, bearings, and electrical connectors.
5. Increasing complexity and sophistication of parts.
6. Testing and qualification requirements.
7. Improperly applied Defense Priority System.
8. Lack of skilled workers.
9. Foreign dependence. (9:108-109,118)

Despite awareness of these factors, leadtimes continue to increase.

Surging certain systems will also affect the industries' ability to produce other critical systems. As explained

previously in the Industrial Structure section, government contracts give little or no incentive for economic lot quantity manufacturing. As a result, industry gears itself to spread out the work in uneconomic parcels to stay busy between contract awards (12:29). In addition, the process is further slowed by,

...the competing and often conflicting interests of the DOD, Congress, defense industry, and large segments of the American public which intrude into every aspect of a weapon system's conception, development, production, and deployment. (5:32)

Raw Materials

As technology has increased, so has the need for certain raw materials which are not available in the U.S. In wartime, critical metals like chromium, platinum, and cobalt must cross a long and potentially dangerous over water supply line. Current engine technology requires the metals just mentioned; without them we cannot build advanced military grade aircraft engines. Many raw materials are available in quantity from nations likely to be unfriendly in war. These nations include the Soviet Union (Platinum, Chromium, Vanadium), Albania (Chromium), Zaire (Cobalt), and South Africa (Platinum, Chromium, Vanadium) (1:33-36).

The U.S. has a strategic raw material stockpile which, in theory, helps provide us with a surge capability. Based on a total mobilization scenario, the DOD has established its requirements. Those requirements have been translated into authorized stockpile levels. But the stockpile has a total shortfall of \$10.4 billion worth of raw materials (39 of 90

strategic materials are stocked below their authorized levels). As an example, Table 2 contrasts the amount of various strategic metals used in Air Force F-15 and F-16 engines to the stockage level in the stockpile.

TABLE 2

ENGINE METALS USAGE & METALS STOCKPILE AVAILABILITY (1:34,36)

<u>METAL</u>	<u>SOURCE</u>	<u>LBS. USED PER ENGINE</u>	<u>STOCKAGE LEVEL SHORTAGE IN MILLIONS OF \$</u>
Aluminum	U.S.	950	- 1,894
Chromium	Foreign	1950	- 40
Cobalt	Foreign	1050	- 225
Columbium	Foreign	100	- 15
Manganese	Foreign	23	0
Nickel	Foreign	4300	- 803
Tantalum	Foreign	3	- 145
Titanium	Foreign	5200	- 1,360

In short, if the initial requirements were accurate, the U.S. will not have enough material stockpiled to produce what it needs in a total mobilization (1:31-38). Naturally, even a fully robust stockpile does not guarantee new aircraft. Industrial capability may prove to be the bottleneck in the acquisition of new aircraft.

Since its inception in 1946, the stockpile composition has periodically been updated to match the strategy and needs of the day. Since 1983, there have been proponents of totally overhauling the national defense stockpile. Based on a 1983 National Security Council (NSC) study, in 1985 the White House announced its intention to modernize the

stockpile by reducing the stockpile goal from \$16.1 billion to \$.7 billion. Excess materials were to have been sold off. Congressional concern precluded the reduction in the stockpile. Congressional investigation revealed that the NSC study was based on a limited intensity full mobilization scenario vs the more traditional unlimited intensity total mobilization (15:8-9,20-21).

In the mid 1980s the perceived threat posed by the Soviet Union helped ensure the continuation of a large scale (though underfunded) national defense stockpile. This often overlooked area of defense industry capability is currently getting renewed interest by the DOD, but major improvements are still far off into the future (35:1-13). With a decrease in the perceived threat of all out war and the decreasing defense budget, the national defense stockpile may once again be considered for significant restructuring.

Strategic Planning

During the late 1940s the United States formulated a policy of containment. Inherent in this policy was a recognition of the need to meet Soviet expansion anywhere in the world. Mobilization capability was considered an important part of the deterrent strategy. The policy of containment continued to be espoused through the mid 1950s, but was gradually undermined by the growing reliance on nuclear weapons which was eventually focused into a policy of massive retaliation. Mobilization capability was

gradually de-emphasized because protracted war seemed a thing of the past. The massive retaliation strategy was evidenced by the "force-in-being" approach to planning (22:28). In the 1960s and 1970s, the U.S. evolved a flexible response doctrine that addressed a wider range of options including both nuclear and conventional options.

Inherent in all these options was the theory that a major modern war, whether nuclear or conventional, would be short. Industrial base planning is largely irrelevant to such thinking, and Vietnam did little to change it. (20:26)

Not until the late 1970s and early 1980s did industrial preparedness reappear as an important part of an overall strategy. For over two decades, industrial readiness was largely seen as irrelevant (22:29). The 1980s "sustained response" doctrine has increased the need for an industrial mobilization ability (20:26). The previously evidenced complacency towards the industrial sector has largely replaced with concern and greater awareness of its weaknesses. Can the U.S. defense industry support the security needs of the United States?

With the recent perceived changes in threat facing the U.S., the sustained response doctrine is in limbo. Should the "outbreak of peace" be long term, with a commensurate decrease in the perceived threat of global war, U.S. defense posture will undoubtedly be affected. The new doctrine will consist of smaller standing forces. Even as the strategic importance of mobilization increases, the increase in warning time will decrease the required level of day to day

mobilization preparedness. The level of mobilization preparedness will also be affected if the traditional total mobilization planning is replaced by planning based on full mobilization planning. The relevance of other weaknesses (foreign sources, raw materials, leadtimes) would also be affected.

The DOD does have an "industrial plan on the books," but it is neither well practiced nor sufficiently detailed (18:73). It will definitely have to be updated to fit into the evolving doctrine. Until then, industry and federal agencies alike, will not act on mobilization issues unless the government properly stresses their importance through realistic (and funded) plans.

Recap

As the United States approaches the 50th anniversary of the conclusion of World War II, our leaders are finally appreciating that the industrial base that was America's in the 1940s is now largely gone. Today's U.S. defense industry will not be able to support the DOD wartime requirements in a major war. Indeed, the U.S. defense industry may not even be able to support an ally in a limited conflict. Production will be limited by the structure of the industry itself. Responsiveness will also be affected by foreign competition, built-in leadtimes, a shortage of natural resources, and a lack of strategic planning. The varied reasons that have decreased the

capability of the U.S. defense industry help reiterate the need for a comprehensive government strategy to overcome the problem.

Graduated Mobilization Response (GMR) may become one key element in that comprehensive strategy. The quality of our strategic planning would be directly affected by adoption of GMR. A properly implemented GMR program would also have provisions for dealing with the weaknesses discussed earlier in the background text.

The next chapter, Graduated Mobilization Response, describes the theory of GMR.

IV. The Theory of Graduated Mobilization Response

Definition

Graduated Mobilization Response (GMR) is a systematic, incremental approach to industrial preparedness. In 1988, an interagency conference adopted the following definition of GMR:

GMR is an interagency coordinating system and process for integrating ambiguous and specific warnings with the appropriate resource actions to: mitigate the impact of, improve responsiveness to, and/or recover from a national security emergency or other crisis. (30:2)

This definition reveals key points of GMR:

- First, GMR is a coordinating system; its intent is integration of existing plans, policies, and procedures. GMR is not intended to replace existing plans (34:ES-1). Existing plans will, however, have to be expanded to include GMR concepts and data requirements.
- Second, GMR is a process that matches ambiguous and overt warnings to carefully measured responses. The attempt to act upon ambiguous warnings is a unique feature of GMR.
- Third, GMR can be used in a pre-emptive mode, reactive mode, or recovery mode. GMR emphasizes averting/mitigating impacts through early detection.
- Fourth, the area of relevance for GMR is a continuum from peacetime emergencies through the more traditional concern of war-related surge and mobilization.

Each of these key points will be examined in greater depth in the following discussion.

Purpose

GMR is being institutionalized because the development of a graduated mobilization doctrine and system has been identified as a priority National Security Emergency Preparedness (NSEP) goal. Identification as a priority goal was based on recent practical experience which demonstrated the practicality and usefulness of such a system.

According to Paul Taibl's monograph Graduated Mobilization Response: A Key Element of National Deterrent Strategy, the purpose of GMR is:

To provide the National Command Authorities a range of political, economic, and military options that will assist in the management of a national security crisis. These options are designed with two goals in mind: first to improve deterrence and avoid war; and second to prepare for war should it come.
(30:ii)

Although this purpose statement is useful, it is slightly misleading. GMR provides a systematic approach to solve national security crises. GMR does not create options per se. The options already exist, but under the GMR system they are clearly articulated by individual agencies/departments in a costed format, consolidated, and then forwarded to the National Command Authorities. What it does is make the National Command Authorities (NCA) aware of their options and the potential mixes of those options. Through enhanced intra-agency option analysis and

inter-governmental coordination, GMR provides the decisionmakers with an understanding of the economic and political costs of both action and inaction.

The two goals stated in the purpose statement are accurate and important. First, GMR is used to signal intent; if the crisis abates, the preparatory activity would be an end in and of itself. If the preparatory activity did not abate the crisis, the initial activity would serve as the foundation of progressively strong measures (29).

Assumptions

For GMR to be successful, the following assumptions must hold true:

- Major conflicts are likely to be preceded by a period of rising tensions (34:2-2).
- The intelligence community (specifically the National Intelligence Officer for Warning {NIO}) has the ability to successfully monitor, interpret, and report ambiguous warning data.
- Establishing a graduated system of responses with clearly identified thresholds and impacts will help government leaders act on ambiguous warning data.

Organizational Roles and Responsibilities

In emergency, surge, or mobilization situations there are key governmental organizations involved. Traditional surge and mobilization considerations have centered on the

military side of the government. GMR encompasses those traditional considerations, but it also incorporates non-war emergency considerations as well. Since GMR covers such a wide variety of potential applications the term resource mobilization is more appropriate than the more restrictive term industrial mobilization. Because of the expansive scope of GMR, the involvement of numerous federal departments and agencies is also very important. The primary federal departments and agencies are listed in Table 3. The primary DOD organizations are listed in Table 4.

Concept Exploration

GMR Continuum. Chapter 3 discussed how the planning scenario affects the apparent relevance of national mobilization. From the mid 1950s into the 1980s, the planning scenario used by U.S. decision makers basically involved a high intensity war of short duration. The "come as you are" philosophy resulting from such a scenario effectively rules out the importance of mobilization. Since the early 1980s, considerable thought has been given to preparation for wars of lower intensity and/or longer duration. Although the change from a short war orientation has been slow, recent events in Europe make the probability of a high intensity superpower war seem remote.

TABLE 3

PRIMARY FEDERAL AGENCIES/DEPARTMENTS INVOLVED WITH GMR
(10:C2-C5)

Federal Emergency Management Agency (FEMA) - FEMA is the sole government agency charged with the coordination and support of emergency preparedness programs and plans initiation, development, and implementation among federal departments and agencies.

Department of Commerce (DOC) - Enforces the Defense Priority Allocation System (DPAS)

Department of Energy (DOE) - Establishes and maintains a national petroleum reserve. Also manages the priorities and allocations of all forms of energy.

Department of the Interior (DOI) - Assesses the availability of non-fuel resources, establishes management procedures for those minerals, and coordinates extraction of non-fuel minerals.

Department of Labor (DOL) - Determines skill categories for DOD labor requirements. Also oversees the recruitment, training, and allocation of civilian manpower.

Department of Transportation (DOT) - Determines and identifies the resources required to meet DOD transportation requirements. Prioritizes non-DOD transportation. Manages the use of surface infrastructure.

Department of the Treasury - Acts as the federal financial resource manager. Establishes monetary priorities, allocations, and control. Provides grants/loan guarantees to private industry.

Maritime Administration - Creates and maintains an efficient U.S. shipbuilding and repair capability.

TABLE 4

PRIMARY DEPARTMENT OF DEFENSE ORGANIZATIONS INVOLVED WITH GMR
(10:C2-C5; 2:25)

National Command Authorities (NCA) - The NCA includes only the President and the Secretary of Defense, or their duly deputized alternates or successors. Only the NCA have the authority to direct the armed forces in their execution of military action.

National Security Council (NSC) - The NSC is the principal forum to consider national security issues. It consists of the President, Vice President, Secretary of State, and Secretary of Defense. The NSC is advised by the Chairman of the Joint Chiefs of Staff (JCS) and the Director of Central Intelligence.

Under Secretary of Defense for Policy (USD(P)) - Represents the DOD on interagency industrial mobilization coordination. Provides policy guidance for GMR actions. Oversees the DOD Crisis Management System. Monitors the use of military resources in the support of essential civil sectors. Co-chairs the Mobilization Steering Group which overviews all mobilization activities within DOD.

Deputy Under Secretary of Defense for Industrial and International Programs (DUSD(I&IP)) - Develops and oversees the implementation of Industrial Preparedness Planning Program (IPPP) policies and procedures. Monitors Services' and DLA implementation of IPP directives and guidance. Coordinates defense production priorities. Co-chairs the Mobilization Steering Group.

Organization of the Joint Chiefs of Staff (OJCS) - Evaluates military threats and provides industrial mobilization recommendations to the Secretary of Defense via the Chairman of the JCS. Publishes the classified biannual Joint Strategic Planning Document (JSPD) and The Joint Strategic Capabilities Plan (JSCP) which delineate expected industrial production and repair capability. Plans and conducts periodic industrial mobilization exercises.

Defense Logistics Agency - Develops an Industrial Preparedness Planning List (IPPL) which is based on the services Critical Item Lists (CILs). Develops Industrial Preparedness Measures (IPMs) to counter industry deficiencies.

The Military Departments - Define and Promulgate DOD IPPP policy and guidance. Establish mobilization requirements. Develop industrial base capability assessments and investment strategies to support GMR options. Develop Critical Item Lists (CILs). Identify industrial shortfalls, bottlenecks, and constraints.

The Services' Logistics, Material, and Systems Commands - These commands are involved in IPPP functions via Program Management, Finance, Production, Logistics, and Procurement activities.

Reflective of the changing threat, GMR is not geared exclusively or even primarily towards the worst case. GMR is meant to respond to any of the military requirements generated in the conflict spectrum shown in Figure 1.

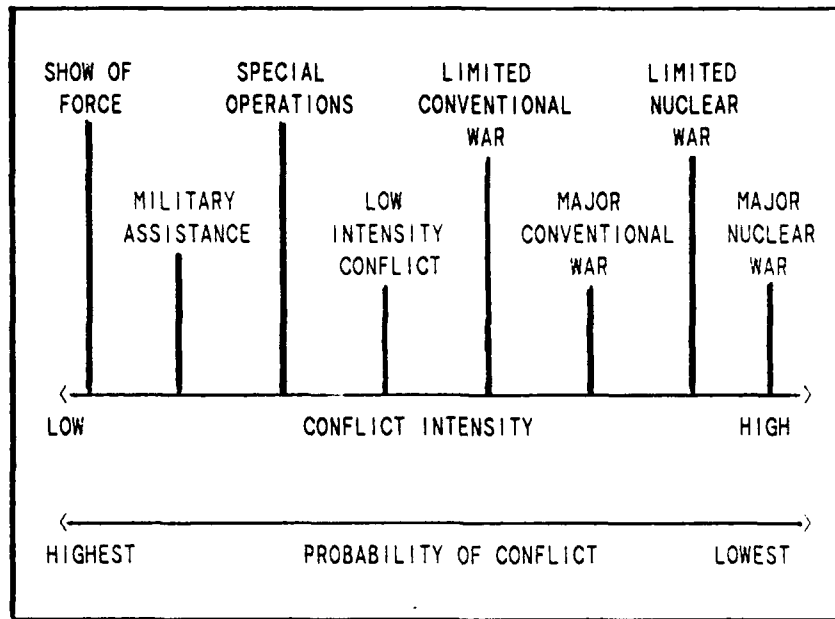


Figure 1. One Version of the Conflict Spectrum (23)

Interestingly, there is a theoretical inverse relationship between the intensity of a conflict and the probability of that type of conflict. In recognition of this, GMR does allow reaction to all levels of conflict. Whereas mobilization was formerly viewed as being initiated with an "on/off" switch, it can now be viewed as being initiated with a "rheostat." The recognition that directed industrial base actions will be required at levels below that of a WW II total mobilization is an important acknowledgement of reality. Another key concept is the recognition that conflict may also take place on an economic level or due to peacetime crises.

According to a study by The Analytic Sciences Corporation (TASC), examples of general categories of items requiring GMR action include:

- Natural disasters or terrorism which could destroy substantial portions of our defense and economic infrastructure
- Adverse international events that require a demonstration of national will or signalling of disapproval of the present course of events
- A sudden requirement to support an ally or client state in conflict or to replace such a nation's war losses rapidly to restore pre-conflict balances of power
- A need to provide improved sustainability, war reserves, readiness, or defensive preparations in order to prepare for (or deter) the outbreak of conventional conflict
- A need to respond to technological breakthroughs or abrogations of arms control treaties
- Soviet military or industrial mobilization
- Preparing for or recovering from nuclear war. (34:ES2-ES3)

GMR is intended to address civil crises which usually received limited emphasis in previous mobilization planning. Specific examples provided by Mr. John Starns include:

- Post war recovery
- Civil Defense preparation
- Natural disaster
- Environmental hazard
- Foreign embargo/sanctions
- Economic boycott
- Foreign aid
- Stabilization of industrial decline
- Major technology thrust (29)

There are numerous plans for handling individual crises and threats. Ofttimes, however, they are implemented in a vacuum. The interrelationships and interdependencies of one course of action versus another course of action are often

unclear, unknown, or simply not considered. GMR attempts to look at various options from a cost effective, systems perspective. Through interagency coordination, GMR attempts to identify all the possible actions and highlight cost effective options that provide flexibility, match available lead time, and enhance deterrence (30:4).

GMR Coordinating System. When complete, GMR considerations will be included in all planning from the President down to the individual producer. Paul Taibl in his monograph on GMR described the highest level planning in the following terms:

At the national level, GMR actions are developed under the auspices of the National Security Emergency Planning Senior Interagency Group (NSEP SIG). The National Security Council (NSC) provides the management structure in which GMR is suffused throughout government. The interagency process--the NSEP SIG and the subordinate National Mobilization Interagency Group (NMIG), with FEMA in a coordinating role--ties the concept to National Security Emergency Planning procedures. (30:iii)

As described above, for planning development purposes the roles are clearly spelled out. Unfortunately, activation and control in a real world crisis is not so clear-cut. There are three control structures which would potentially be eligible to direct GMR efforts in a crisis management situation. They are:

1. Policy Coordinating Committee (PCC) for Mobilization Preparedness and Emergency Planning. The PCC currently provides recommendations to the NSC on GMR related topics. As presently organized,

it is not an action oriented structure but is advisory in nature and meets only several times per year. Any member of the PCC can request the FEMA chairman convene the PCC when he/she feels it is warranted.

2. An unnamed Reagan administration functional structure that was mandated by the NSA assistant to the president (19:12).

3. The Office of Defense Resources (ODR) which would be created upon declaration of a national emergency if the 1964 National Plan For Emergency Preparedness was adhered to (19:12).

The ideal control structure would be one that is a dedicated function for interpreting and initiating GMR action. At the very least, frequent interaction of the intelligence gathering representatives with a convening authority would be a required. As they are currently organized, none of the contending structures is ideal.

Costed Option Packages. At the individual department and agency level, costed option packages will describe the range of options available at each GMR stage and approximations of the cost of those options. Each agency would list both the options and the likely ramifications of those options.

COSTED OPTION PACKAGE

1. THREAT ASSESSMENT. Describe potential or actual crises that could require a U.S. response to deter or mitigate.
2. ALTERNATIVE RESPONSE OPTIONS. Identify alternative political, military, or industrial responses that could be used to address each crises. Political options are the responsibility of the Office of the Under Secretary of Defense for Policy (USD(P)). Military options are the responsibility of the Organization of the Joint Chiefs of Staff (OJCS). Industrial options are the responsibility of the Office of the Deputy Under Secretary of Defense for Industrial and International Programs (ODUSD(I&IP)).
3. RESPONSE IMPLICATIONS AND SHORTFALLS. Discuss the resource implications of the political and military response options and identify resource shortfalls which can only be supplied by the industrial base.
4. CURRENT INDUSTRIAL CAPABILITY TO PROVIDE RESOURCE SHORTFALLS. Provide an analysis of the current production base capability to satisfy each option's shortfall.
5. ACTIONS TO IMPROVE INDUSTRIAL RESPONSIVENESS. Should the base not be able to provide the shortfalls in the times and quantities required, identify those legal (legislative), procedural (directives, federal acquisition regulations), production (industrial mobilization plans), and economic (government coordination) actions that can be used to achieve the production objectives.
6. ASSOCIATED COSTS. Describe the cost for implementing each industrial action. Costs should be partitioned according to procurement of material vs investment in the production base.
7. POLITICAL FEASIBILITY. Assess the congressional and national willingness to support each investment alternative

Figure 2. Standard Elements of a Costed Option Package (29)

For example, the Department of State addresses the diplomatic and political aspects, while the Treasury Department assesses the domestic and international economic impact, etc.. (30:10)

By identifying and circulating all realistic options, each of the 27 agencies and departments which have emergency functions will be able to project the impacts other agencies' actions would have on its planned actions

(30:3,8). A standardized format, similar to the one in Figure 2, will help ensure ease of interpretation and use. GMR plans are required to be shared with relevant federal, state, and local departments and agencies as well as the private sector (11:1823). If well developed, a graduated system, "can permit policymakers and planners to develop management programs that anticipate and respond to the progression of bottlenecks and production problems" (34:2-9).

Early Recognition. One of the most important premises of GMR is early recognition of potential crises will significantly increase the options available for countering those crises. Consequently, GMR attempts to move the initial decision point to the left on the conflict spectrum (see Figure 3)(30:ii). This shift of attention towards pre-crisis action is very different from the way government operates today. Most of today's planning is reactive; the crisis is assumed to have already occurred (30:3). GMR is also reactive. But, if the action is taken early enough, it is also preventive. Looking at the conflict spectrum pictured below, it is evident early crisis recognition, if properly acted upon, has the potential to achieve the objective (or maintain the status quo) at a much lower political and economic cost. Naturally, early recognition and action will not always result in a favorable outcome. GMR counters a progressively worsening environment with incremental increases in action.

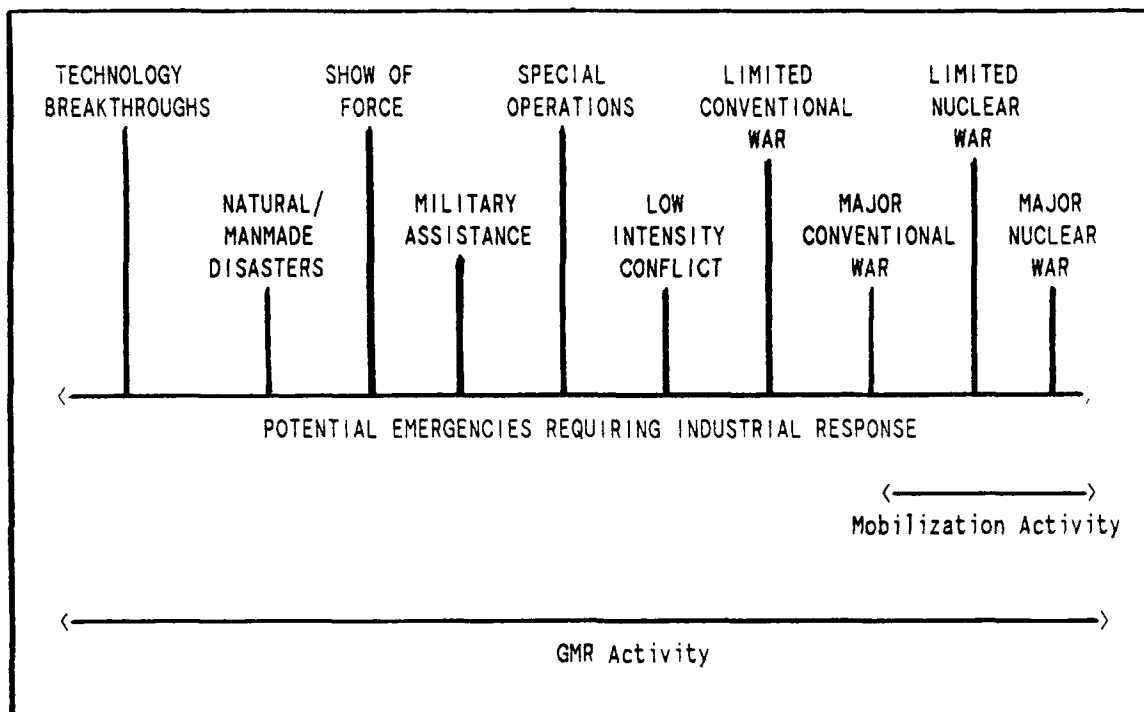


Figure 3. Scope of Traditional Mobilization Activity vs Scope of GMR Activity

The Three Stage Process. GMR is broken into three stages (see Figure 4): GMR Stage 3 is titled Planning and Preparation; GMR Stage 2 is titled of Crisis Management; and GMR Stage 1 is titled National Emergency/War. Each GMR stage includes actions to prepare for the next stage. For example, if the National Defense Reserve Fleet would need to be activated in Stage 1, locating the required refurbishing materials and identifying possible contractors might occur in Stage 2.

GMR Stage 3. GMR Stage 3 primarily consists of peacetime independent agency/department actions and information exchange (30:iii). At this stage, "The U.S. is

in a monitoring mode, observing national and international developments for signals of rising tensions and potential

GMR STAGE 3	GMR STAGE 2			GMR STAGE 1	
PLANNING AND PREPARATION	CRISIS MANAGEMENT			NATIONAL EMERGENCY/WAR	
LEVEL 6	5 TARGETED PLANNING	4 PREPARATORY ACTIVITIES	3 SURGE	2 FULL MOBILIZATION	1 TOTAL MOBILIZATION
DELIBERATE PLANNING AND INVESTMENT		CRISIS PLANNING PREPARATIONS AND ACTIONS Pattern of threat to U.S. interests identified		MOBILIZATION OF THE ECONOMY Direct challenge to U.S. National Security	

Figure 4. GMR Stages and Levels (10:2-2)

crisis or conflict" (29). GMR plans are developed to meet the emergency preparedness functions assigned to federal departments and agencies by Executive Order (E.O.) 12656. These plans include countermeasures against likely problems. These countermeasures are clearly identified in the form of costed option packages. Budgeting and investment for these countermeasures is also accomplished at this stage when practical and affordable.

FEMA is the primary coordinator on plans to ensure plan consistency and provide a macro look at investment needs

(11:1823). The tradeoff at this stage is between efficient peacetime production and an acceptable level of readiness (29). According to Mr. John Starns of TASC, beginning at Stage 3:

Planning and programming targets are established to provide a credible and consistent yardstick for measuring the success of the Industrial Preparedness Program (IPP). (29)

Periodic testing (through exercises, conferences, workshops, etc.) will also allow evaluation of the readiness level and the accurate prioritization of planning and programming targets (29).

Developing capability to match the overall strategy will help ensure the success of GMR. Many inexpensive and logical improvements will be identified through exercises, conferences, workshops, and daily planning activity. These improvements can be made in pre-crisis Stage 3 through the Planning Programming and Budgeting System cycle. Involvement of, and support from, the President's Office of Management and Budget (OMB) will be crucial (30:11). Author Paul Taibl stated, "Integrating GMR into the federal budget development process is an uncharted area" (30:11). Until the President clearly enunciates what the national strategy of the 1990s will be, concerted effort integrating GMR into the federal budget will most likely not be seen.

GMR Stage 2. GMR Stage 2 consists of reevaluating agency plans in light of a specific developing threat and/or crisis. Additional data may need to be

gathered as the threat becomes more focused. Costed option packages are updated or supplemented with new packages based on the nature of the threat. Acquisition of long lead time items should be accomplished at this stage. The surging and stockpiling of critical supplies may also be required.

Funding will likely come from both reprogramming of funds and new funds (11:1823). At this stage, emphasis is still placed on a calculated, measured response and a minimization of disruption to the economy (29). Overreaction could lead to a waste of resources and unnecessary impact on the economy. Underreaction could limit the quality and timeliness of subsequent required responses. This stage is characterized by increased federal coordination of agency and department activity with FEMA centralizing and forwarding recommendations to the National Security Advisor (NSA) (30:iii; 11:1823).

The threshold between Stage 2 and Stage 1 will most likely be a declaration of National Emergency, but many Stage 1 activities could be initiated prior to such declaration (29). Swifter accomplishment of pre-emergency activities can be greatly facilitated through solid planning in GMR Stage 3, including getting congressional approval in the form of standby legislation (30:12).

GMR Stage 1. GMR Stage 1 is characterized by centralized federal control of government agencies and all aspects of the economy (30:iii). Control would be centralized at the NSC or similar level. At Stage 1, as the

U.S. approached Total Mobilization, military requirements would override all non-essential demands for resources. Both surge activity and expansion of the industrial base would be likely. Funding would likely come from supplemental appropriations (11:1823).

Each of the stages can be further broken into intermediate levels. For instance, as depicted in Figure 4 an agency might divide Stage 2, Crisis Management, into two or three segments in order to better organize its activity. These segments are called levels (11:1823).

Incremental Nature of GMR. The incremental nature of GMR is reflected in the three stage, six level structure pictured in Figure 4. The progressive process of GMR has often been compared to the U.S. Military Defense Condition (DEFCON) system, and rightly so since the conceptual basis of GMR was originally termed Industrial Condition (INDCON). In many ways GMR is an industrial equivalent security and defense system. For instance, the military DEFCON system works by placing geographic areas or specific commands at progressively higher alert levels based on the threat they face. DEFCON 5, normal peacetime readiness, leads to DEFCON 4, 3, 2, and/or DEFCON 1, maximum war readiness. The six GMR levels operate in similar fashion starting at GMR level 6, minimum national security level, and progressing to GMR level 1, maximum national security level. Also similar to DEFCONs, GMR levels can be skipped in favor of a higher alert level; the decision maker picks the most appropriate

level commensurate to the threat. But, as was mentioned in the previous paragraph, early action at a lower alert level helps ensure conservation of limited resources and political will. Both DEFCONs and GMR levels are reversible at all levels of implementation. A final important similarity between DEFCONs and GMR levels is the co-existence of varying alert levels. In the military DEFCON system, one theater of operations can be on a higher alert level than another area. For instance, Central Command could be at DEFCON 3 while the continental U.S. could be at DEFCON 5. In a similar fashion, one industrial sector could be at GMR level 2 or 3, while others remain at level 6. For example, if there was a major earthquake in the U.S., the construction industry might be placed at a very high level of government directed activity. Other sectors, like aircraft construction, might remain at level 6 because of their limited capability to render cost effective assistance.

There is, however, several important differences between DEFCONs and GMR levels. A study by The Analytic Sciences Corporation described the difference:

Whereas the DEFCON system defines a series of actions that are taken automatically when any given DEFCON level is reached, the [GMR] levels define suggested actions and options that should be considered at each crises stage. (34:3-1)

It is important to recognize that GMR levels are not specifically linked on a one to one basis with DEFCON levels. Undoubtedly, DEFCON levels will help define certain

trigger points but information regarding actions taken at a specific DEFCON level will be classified. The important point is for the reader to understand that any given DEFCON level will not automatically result in a given GMR level.

Another important point is the scope and flexibility of GMR. As the previous quote stated, GMR is not a rigid system of mandatory actions; it is a flexible process by which to react to a broad range of peacetime and wartime events.

DOD Participation

For the DOD, GMR represents renewed emphasis on a comprehensive approach to mobilization execution. The DOD has long understood its responsibilities in transitioning from peacetime to wartime but it has not always acted to ensure a smooth transition because of a lack of political, budgetary, and/or strategy support. GMR will not require major changes in the way the DOD operates, but it will require changes in how the DOD approaches problems (i.e. mindset) and assigns priorities (30:12). Mobilization considerations will need to be considered equal to other DOD programs (30:13). Weaknesses in mobilization capability will have to be given a priority commensurate with their importance to the overall national or military strategy. Weaknesses will have to be addressed and countered in the Planning, Programming, and Budgeting System (PPBS), Joint Strategic Planning System (JSPS), and the Joint Operational

Planning Systems (JOPS) (30:13). Figure 5 shows the general relationships of GMR to the current DOD systems. As with other federal agencies/departments, until the President clearly enunciates what the strategy of the 1990s will be, concerted effort to integrate GMR into these DOD systems will most likely not be seen.

DOD SYSTEM	GMR STAGE 3	GMR STAGE 2	GMR STAGE 1
PPBS	Outline MOB Pgrm	Costed Option Package	Emergency Budget
JSPS	JSPD/TFCA Scenarios	JIMMP Requirements	Force Expansion
JOPS	Deliberate (Base Case)	Time- Sensitive	Reconstitution

```

*****
* Acronyms *
* PPBS - Planning, Programming, and Budgeting System *
* MOB - Mobilization *
* JSPS - Joint Strategic Planning System *
* JSPD - Joint Strategic Planning Document *
* TFCA - Total Force Capability Assessment *
* JIMMP - Joint Industrial Mobilization Planning Process *
* JOPS - Joint Operation Planning System *
*****

```

Figure 5. Relationship of GMR Stages to DOD Systems (30:18)

Industry Participation

Industry participation in the development of the GMR concept has been limited to several exercises. Ultimately, it will be the industrial base which attempts to fulfill the requirements of a mobilization whether graduated or otherwise. For this reason, it will be very important that option packages are validated in Stage 3 through direct

verification with industry, or indirect verification by industry data. An option can be worthless (or worse) if the assessment it contains is inaccurate. Non-antagonistic dealings with industry and a comprehensive data system would both go a long way toward improving DOD's Industrial Preparedness Planning Program (IPPP).

GMR should be tied to the current contract process. This can be done through measures allowed in the original 1950 version of the Defense Production Act. Pre-coordinating surge and production measures makes sense in many cases (30:19). So do incentives. At this level, the GMR link between government and industry will have to be made by:

...the program managers, government contract officers, plants reps, and Armed Services Production Planning Officers (ASPPPOs) who deal regularly with-- and are familiar to--industry. (30:19)

An informed defense industry will be a strong asset in time of need. But to have an informed defense industry, the DOD must clearly identify its needs first.

History

Although the term Graduated Mobilization Response is new, the concept of a graduated mobilization response is not. The mobilization efforts for both WW II and the Korean War followed a graduated pattern. Even though both efforts were ultimately successful, the WW II mobilization can be criticized for being ineffective at the earliest stages. From both of these experiences an important lesson can be

learned. According to a study by The Analytic Sciences Corporation:

The major lesson to be learned from these lost opportunities is that a pre-developed system of preparedness options can clearly reduce (although perhaps not entirely eliminate) the uncertainties and false starts of a mobilization or preparedness effort. (34:2-9)

The solutions to WW II problems were thoroughly incorporated into the Mobilization Plan of 1947. Consequently, that plan was extremely beneficial to the Korean War mobilization effort (34:2-11). The 1947 Mobilization Plan was the first time mobilization was clearly spelled out as a deterrent strategy and not simply an activity to be carried out on the eve of battle (30:6). Despite the success of the graduated mobilization effort, the post-Korean War shift towards heavy reliance on nuclear weapons meant a commensurate decrease in reliance on mobilization (34:2-2).

Revitalization of graduated mobilization as a deterrent strategy began in 1979. At a conference sponsored by the Industrial College of the Armed Forces several participants, "...identified industrial DEFCONs as a principal way to improve crisis responsiveness" (34:ii). It was not until 1983, however, that a FEMA conference specifically addressed, "...the need for a system of actions and options to improve responsiveness during the early stages of a crisis" (34:ii). A Ford Foundation grant allowed initial exploration of the concept. From 1984 to 1986, The Analytic

Sciences Corporation (TASC) published several additional studies on the "INDCON" concept (28).

As the concept developed, it incorporated concerns more inclusive than traditional acquisition and logistics support activity planning. According to the 1987 TASC report TR-5263-4 the areas of concern included:

- Government planning and management activities
- Economic policy
- Trade policy
- Production capacity
- Labor force
- Materials and components
- Civil activities
- Infrastructure (34:ES-5)

As the concept coverage expanded to include a larger array of government agencies and economic sectors, the term Industrial Condition or INDCON was replaced by the more inclusive term Graduated Mobilization Response or GMR. Along with the name change, the structure changed from emphasis on a 6 level INDCON process to a 3 stage GMR process. The concept refinement process involved a series of FEMA and DOD sponsored interagency meetings (27). The key point is that GMR, unlike DEFCONs, operates throughout a wide continuum of activity and is not limited to wartime lock-step responses.

During 1987, support for GMR picked up momentum. The concept was endorsed by the DOD Mobilization and Employment Steering Group. The TASC report mentioned above was endorsed by civil agencies (the military services had endorsed it in 1986). GMR was tested for the first time in

Exercise PROUD SCOUT and related serial exercises. The serial exercises included direct play by the Secretary of Defense, Chairman of the JCS, and Chairman of the House Armed Services Committee (28). Author Paul Taibl relays an important point from the after action report:

Sufficient intelligence was, and allegedly will be, available to decisionmakers disposed to be warned. What was absent--just as before WW II--was articulation of a range of options, suitable to the threat, with which to respond to incremental thresholds of warning. (30:7)

To counter the lack of articulated options, a costed option format was developed during the exercise. Unfortunately, adequate requirements information could not be supplied directly by the services and the TASC MAIN model had to simulate the data. (The TASC MAIN model is a macroeconomic model which showed the impact of INDCON related policy changes on the economy. It has since been replaced by a more current model under the Joint Industrial Mobilization Planning Process {JIMMP}). The development and use of costed option packages is an important issue which has still not been resolved.

Another important event in 1987 was the identification of GMR as one of seven priority NSEP goals to be accomplished by 1989. Although the completion date of 1989 was not met, the declaration of GMR as an NSEP goal gave it real legitimacy.

In 1988, further support was given to GMR by its inclusion in the President's National Security Strategy. In

support of GMR, that strategy included the following statement:

In peacetime planners will identify and catalogue relevant industrial base capabilities, prepare specific response options, and create a series of graduated responses to be implemented within existing capabilities at a time of crisis.
(10:2-2)

In 1988, the concept was endorsed in the Defense Authorization Act. It was also endorsed by NIO/Warning. NIO/Warning agreed to develop, "an intelligence warning product useable by the NSEP community for GMR warning" (28).

DOD implementation activity included Office of the Under Secretary for Defense Acquisition (OUSD/A) adopting a GMR implementation agenda, and the publishing of the "DOD Guide to Mobilization." The Air Force incorporated GMR concepts into its War and Mobilization Plan (WMP). Also in 1988: "E.O. 12656 established GMR as a national policy and assigned GMR planning responsibilities to all relevant departments and agencies" (28).

In 1989 the pace of GMR slowed somewhat. FEMA developed a draft Defense Mobilization Order (DMO) and took responsibility for interagency coordination of GMR plans. The GMR concept was again tested at GLOBEX 89. At GLOBEX 89, a draft national option plan was briefed and a new format for costed option packages was tested. Following GLOBEX 89, NIO/Warning began disseminating a GMR Warning

product. FEMA also distributed a fully coordinated national option plan (28).

In 1990, the Federal Register (Jan 19) contained a final ruling from FEMA that firmly established GMR as government-wide planning requirement. It also provided policy guidance, background, and department/agency responsibilities (11:1820-1823). FEMA also prepared a Federal Preparedness Guidance Document and a prototype GMR plan for DOE.

The OSD has been working on the development of DOD Directive 4005.1 and the accompanying Manual 4005.3M. Publication is scheduled for Fall 1990. In addition, the OSD is sponsoring a National Security Directive (NSD) which is strongly supportive of GMR. That NSD is now in draft form. The OSD is also developing a prototype GMR plan based on a simulated war in the Middle East. That prototype will give the services a clearer picture of what GMR entails.

Throughout 1990, TASC has been developing DOD industrial GMR implementation policy for DOD/OSD. Additional GMR related actions are discussed in Chapter 5 under Topic 4 questions q., r., and s..

The next chapter, Chapter 5, contains the results from interviews with 16 mobilization experts. The interviews covered mobilization issues, with emphasis on GMR. In Chapter 5, the interview information will be reported, analyzed, and contrasted with the theory discussed in this chapter.

V. Findings and Analysis

Introduction

This chapter contains interview replies and an analysis of those replies. The first two steps of this research laid the foundation for this chapter. Step 1 involved an extensive literature review in the areas of mobilization and GMR which allowed the author to expand his knowledge base, develop interview questions, and identify mobilization experts. Step 2 involved developing a full set of interview questions which would provide answers to the investigative questions. The result was the 25 page interview shown in Appendix C.

Interviews were conducted with acknowledged "experts" in the area of mobilization. The experts consisted of: 1) Authors who were identified via the literature review. 2) The most knowledgeable representatives from "major" government agencies currently involved with the planning and/or execution of GMR. The definition of "major" was based on the literature review. 3) Additional sources identified by the experts in 1) and 2), above. Research showed the number of experts to be quite small; 16 experts were contacted and interviewed. Those interviewed are listed in Appendix D.

The telephone was used for interviews because the experts were located almost exclusively in the Washington D.C. area. The interview questions were mailed to the interviewees

prior to the interviews to allow them time to research their answers if they wished. Nonattribution was guaranteed by the author.

The Interview

The interview was comprised of four topic areas: (1) The historical relevance of past mobilizations in the preparation for future conflicts; (2) The strengths and weaknesses of the current industrial base; (3) The present and future state of mobilization planning and preparedness; and (4) GMR specific questions. The four combined topic areas included 34 Likert scale responses, 2 multiple choice, 4 rank order, and 7 open-ended questions. In addition, comments were solicited after most questions. Those comments are arranged in random order following each question.

For each question in the interview, this chapter lists the question, provides summary statistics of the Likert responses, analyzes the Likert and verbal responses, and then lists the respondents' comments. It's important to note that not every respondent answered every question; not all questions were applicable to all respondents. Not every respondent had comments for every question. The most pertinent portion of each respondent's comments are shown. In all cases the original spirit of the answer is maintained. The comments made by the respondents have been slightly altered in some instances so the reader might

better understand them out of the context of the entire conversation.

Interview Findings and Analysis

Sixteen of the 17 experts contacted participated in the interview. The interviewees were asked to address the questions from their departments/agencies perspective. In addition, their perspectives on other departments/agencies were garnered. The varied responses reflect the differences in perspective the agencies and departments have. In some cases, the varied responses also reflect the lack of internal government consensus on mobilization issues. Table 5 shows a summary of the Likert and multiple choice responses. Table 6 shows the rank order response means. The Likert, multiple choice, and rank order responses are supplemented by comments. The comments help provide the proper interpretation of the quantifiable portions of the responses.

Please note that throughout the interview, references to mobilization are focused on industrial and resource mobilization vs military mobilization.

TABLE 5

LIKERT RESPONSES FROM THE RESEARCH INTERVIEW

TOPIC	QUESTION	RATINGS					MEAN
		1	2	3	4	5	
1	a.	4	7	4	1		2.12
	b.		5	2	8	1	3.31
	d.	8	7		1		1.62
	e.	1	7	2	4	2	2.93
2	a.	1	4	4	4	2	3.13
	b.		3	5	4	3	3.46
3	a.	3	8	3	1	1	2.31
	b.		5	2	6	2	3.33
	c.		1	4	8	3	3.81
	d.		9	1	6		2.81
	e.	3	11	2			1.93
	f.		2	3	6	5	3.87
	g.		2	3	9	2	3.68
	h.		4		10	2	3.62
	i.	9	5	2			1.56
	j.	7	6	3			1.75
	m.		6	3	4	3	3.25
	n.	1	7	1	7		2.87
	o.		2	2	8	4	3.87
	p.	3	6	5	2		2.37
4	a.	5	9	1		1	1.93
	b.	3	9	1	2		2.13
	c.		7	3	4	1	2.93
	d.		3	2	11		3.50
	e.		3	1	11	1	3.62
	f.		5	1	8		3.21
	g.	1	6	5	3		2.66
	h.		7	3	3		2.69
	i.		5	6	2		2.76
	j.	1	6		9		3.06
	k.	1	5		10		3.18
	l.				8		4.00
	m.		1		6		3.71
	n.	1	11	1	2	1	2.31

TABLE 6

RANK ORDER RESPONSES FROM THE RESEARCH INTERVIEW

<u>TOPIC</u>	<u>QUES.</u>	<u>ITEMS</u>	<u>MOST FREQUENT RANK</u>	<u>FREQUENCY</u>	<u>MEAN</u>
1	c.	World War I	4	7	3.54
		World War II	3	5	2.08
		Korean War	1	6	1.50
		Vietnam War	1	4	2.16
2	c.	Appropriations	8	5	6.23
		Dependence on foreign sources	1	3	3.73
		Inadequate planning	1	3	3.57
		Infrastructure	8	4	6.30
		Basic Industry	5	4	4.00
		Trained workers	4	4	3.66
		Tooling	1	6	2.46
		Raw materials	5	4	6.00
		Other	1	3	N/A
4	o.	Triggering events	1	6	2.25
		Funding	2	4	3.30
		Implementation mechanisms	3	4	3.60
		Industry support	6	5	5.10
		Policymaker support	1	4	2.11
		Legislation	2	2	4.33
		Other	1	4	N/A
4	p.	Command structure	1	2	4.30
		Warning signals	1	10	1.76
		Industry planning	2	1	6.00
		Interagency coordination	2	2	4.44
		Presidential support	2	2	3.57
		Public support	4	2	4.66
		Industry support	6	2	5.57
		Legislation	1	1	5.33
		DOD requirements	2	3	3.28
		Other	1	4	N/A

TOPIC 1: HISTORICAL RELEVANCE

QUESTION A:

Experience from past U.S. mobilization efforts remains relevant for national and organizational planning.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION A:

4	7	4	1	
---	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 69% Agree or Strongly Agree
6% Disagree or Strongly Disagree
Mean = 2.12
16 People responded

ANALYSIS OF QUESTION A: The respondents shared a fairly strong belief that past mobilization experience remains relevant for today's planning. The undecided respondents felt changes in the threat facing the U.S. may make the large scale efforts from earlier wars less likely. Only one respondent felt past experience was irrelevant.

RESPONDENT'S COMMENTS:

It's hard to be sure, the economy has changed so much since WW II.

We can always learn something from the past.

There are many lessons to be learned from history. Many of today's "new" thoughts originated in the past.

It depends on your fundamental position. I agree, if our planning scenario is global war with the Soviets. But, I disagree if you look at the world situation and say regional wars are the greatest threat.

QUESTION B:

Experience from past U.S. mobilization efforts is adequately incorporated in the present national and organizational mobilization plans.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION B:

	5	2	8	1
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 31% Agree or Strongly Agree
56% Disagree or Strongly Disagree
Mean = 3.31
16 People responded

ANALYSIS OF QUESTION B: The majority of the respondents felt past experiences are not adequately incorporated. Several of those who felt past experiences were adequately incorporated do not favor heavy reliance on the past. The more relevant the past was to the respondent, the less likely the respondent would feel adequate incorporation.

RESPONDENT'S COMMENTS:

Unfortunately, yes. But it doesn't seem to have a lot of relevance.

We are doing many of the same sins that we knew existed from years ago.

Again, I agree with a global scenario and disagree if you use a regional scenario.

QUESTION C:

Which of the past industrial mobilization efforts do you think provides the most significance for present and future industrial preparedness planning? Please rank order your response from most significant (1) to least significant (4).

_____ World War I

_____ World War II

_____ Korean War

_____ Vietnam War

_____ I do not think experience from past U.S. mobilizations provides significant help in preparation for future conflicts.

RESULTS OF QUESTION C: See Table 7.

TABLE 7
RANK ORDER RESPONSES FOR QUESTION 1 C.

	# OF TIMES RANKED AS				
	MEAN	1	2	3	4
World War I	3.54		1	3	7
World War II	2.08	4	3	5	
Korean War	1.5	6	3	1	
Vietnam War	2.16	4	4	2	2

ANALYSIS OF QUESTION C: None of the respondents unequivocally picked the last choice. But, two respondents did rank order the wars and also checked the last choice. Both of those respondents felt that there may not be direct relevance to today's threats. Two other respondents failed

to rank order the wars for the same reason. Indeed, as can be seen by the comments, the respondents felt the relevance of any of those wars is strongly dependent on what scenario is used. WW I was deemed the least relevant. Feelings on WW II were mixed. The Korean and Vietnam Wars were reported to be more relevant toward today's more likely threat, regional or limited conflicts. Two respondents stated that any overreliance on the past can limit our focus on the future.

RESPONDENT'S COMMENTS:

The Korean War offers significant information from the standpoint of thing that we would have to do and barriers we would have to overcome.

The rank order depends upon the purpose for which we would mobilize. For a regional war, Korea and Vietnam might be more pertinent. But for a U.S. vs. U.S.S.R. global war, I'm not sure past "lessons" help since our economy is too globalized.

A combination of all the wars, plus recent experiences supplying allied/special treaty nations involved in their own conflicts is the best mix. We must remain aware of the possibility of the need for massive mobilization of the country to support major war efforts, but we must give equal attention to the stress created in more probable regional scenarios.

The Korean War is most relevant to today's environment. If we were to get into a war in say the Middle East, the mobilization order would be similar to the one issued by President Truman. We'd say mobilize to support our forces in the Middle East and also mobilize to deter a wider conflict.

World War II might have some relevance depending on the scenario. World War I I'm not really familiar with, and for the Korean War it seems we were already pretty much mobilized so I'm not sure how relevant that would be.

Experience is useful, but lessons learned are often the wrong ones. You need flexibility, planning, and directed action in key sectors. The specifics of history are too often emphasized. The generalities are of more importance.

There may not be direct relevance in all cases. Past wars relied on mobilization. Current wars may go nuclear before the massive effects of a mobilization could be realized.

In terms of the mobilization directives and instructions as they are written now, WW II and WW I are most important. But our experiences in Korea and Vietnam, which were less than total mobilizations, are allowing us to develop things like GMR. Korea and Vietnam are also more like what we expect to see in the future.

WW II, the Korean War, and the Vietnam War should provide 50%, the other 50% of mobilization focus should be on the effects of globalization of the economy. The issues of the future are much, much different from the mobilization experiences of the past. We rely too heavily on past experiences. Past experiences have been incorporated into planning, possibly to a degree that prevents us from looking at the new issues. The nature of the world has changed tremendously and I don't know if we've recognized the problems created for mobilization by globalization of the economy.

During Korea and Vietnam, there was not a full industrial mobilization effort, but rather surge production in limited sectors. World War I industrial mobilization seemed to be late started and not focused. I believe that WW II presents a good planning basis. You can equate the ramp-up of production in support of Lend Lease prior to our direct involvement to the GMR concept of today.

It is hard to rank since each is important due to the size and intensity of the conflict and the "lessons" from each conflict that could effect future war planning. All of the scenarios reflected by the four wars are a possibility - global conflict may be the least likely -- but the lessons of WW I may "teach" us again if we dismantle too much of the Defense Industrial Base.

Sophistication of the weapons systems was the main reason for my rankings. The weapons of the Vietnam era give us the best idea of the timing required today (even if it wasn't a mobilization).

QUESTION D:

Industrial surge actions (for example: the replacement of equipment given to the South Vietnamese, and the replacement of items provided to Israel in 1973) are more likely to be required than industrial mobilization actions.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION D:

8	7		1	
---	---	--	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 94% Agree or Strongly Agree
6% Disagree or Strongly Disagree
Mean = 1.62
16 People responded

ANALYSIS OF QUESTION D: The respondents were in almost complete agreement that industrial surge actions are more likely than industrial mobilization actions. The examples given were, as noted by the respondents, not true surges. They were, however, situations in which the depletion of U.S. material made surge actions a very real possibility.

RESPONDENT'S COMMENTS:

I agree, although in these cases we actually took a chance on our own security interests by drawing down our own stocks. Near normal procurement took years to replenish our stocks.

Don't discount the possibility of U.S. involvement in a regional conflict. It could be of varying intensity and length.

I am not really sure if we can call these examples "surge". It took many years for the PWR stockpile levels to be regained after the 73 issue to Israel. While surge plans were available, the less costly option was taken to add the additional requirements to ongoing contracts. Because it took so many years to reach the pre-conflict stock levels,

there is talk that should such an occurrence happen again,
the surge option to a contract should be enacted.

With the present threat, surge action is where we should
be focusing our planning.

But their consequences are, by the same token, less
important.

A surge is more likely. In both of the examples given
however normal procurement was really used vs. surging.

They are not more likely, they are just as likely.

We are working on the basis of anticipating regional
conflicts or supporting client countries rather than global
or nuclear war.

QUESTION E:

Industrial surge actions (for example: the replacement of equipment given to the South Vietnamese, and the replacement of items provided to Israel in 1973) are more important for present industrial planning than industrial mobilization actions.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION E:

1	7	2	4	2
---	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 50% Agree or Strongly Agree
 37% Disagree or Strongly Disagree
 Mean = 2.93
 16 People responded

ANALYSIS OF QUESTION E: Recognizing the higher likelihood of surge actions did not translate into the respondents feeling it was necessarily more important. Almost half of the respondents feel a wider range of possibilities should be planned for. To make that possible, more information will have to be gathered on the industrial base. Several respondents pointed out that surge actions require a different focus of planning and different actions than mobilizations.

RESPONDENT'S COMMENTS:

It depends on how far down we draw our forces. We don't know what the floor is yet on our conventional forces.

They are not more important, they are just as important.

I think we are moving away from the "come as you are war," so I disagree in the context that industrial prevention in general is becoming important.

I would say that it is only important as an example as to what happened because we did NOT surge production.

All possibilities should be planned for - it doesn't cost much. Investment in defense material and force structure should be dictated by the threat and the likelihood of the threat.

Our mobilization plans look too much at individual contractors. We need to take a more macro look at the sector level. We don't have real good access to sector level data. Macro models will have to be used when our requirements greatly exceed the brick and mortar capabilities of our current contractors.

It's important to note that the North American industrial base hasn't been looked at very closely. Is it in fact capable of providing the kind of support that is necessary?

The likelihood is so much greater for surge than a total mobilization. If we were ever faced with a total mobilization, we might skip from a lower intensity conflict to a much more catastrophic situation with nuclear weapons.

I will disagree from the standpoint that the actions you take in a surge vs a mobilization are different. From a risk avoidance perspective you need to plan for both eventualities, even though the likelihood of mobilization is less.

TOPIC 2: STRENGTHS AND WEAKNESSES OF THE CURRENT INDUSTRIAL BASE

QUESTION A:

The current industrial base has the capability to provide adequate support if mobilized.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION A:

1	4	4	4	2
---	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 33% Agree or Strongly Agree
40% Disagree or Strongly Disagree
Mean = 3.13
15 People responded

ANALYSIS OF QUESTION A: Despite the apparent disagreement reflected in the Likert responses, the respondents were in almost total agreement. Some of the respondents approached the question "I agree, but..." while others approached the question from a perspective of "I disagree, unless..." Time is the key theme in most of the respondents answers. The respondents felt the problems with the industrial base could largely be overcome with enough time. Both those who agreed and those who disagreed stressed that adequate support could not be provided rapidly. Foreign dependencies and lack of industrial data were additional concerns raised.

RESPONDENT'S COMMENTS:

It depends on how you define the current industrial base, you can limit it to the U.S. or you can include the entire West (i.e. the free world). Our government needs to look closely at the foreign dependency issue. Creating an American producer does no good if the Japanese continuously improve the technology and the American producer doesn't.

For any major war, the industrial base is not prepared.

Given enough time I agree. But we can not do it rapidly.
If time becomes an issue I would have to strongly disagree.

It's scenario driven, and there are so many voids that we probably could not mobilize adequately.

With the exception that we're not really sure what the implication of foreign dependencies are.

Given adequate time.

Time is the key - we need approximately 2 years to as much as 4 years. For instance, the present U.S. ammunition base could not support a Vietnam type war.

Lack of information makes mobilization and surge capabilities hard to determine.

I agree, if we have time. But if we were to go to war tomorrow, we'd be in trouble.

It's hard to determine out of context; it's based on the threat and time.

We cannot respond quickly. The erosion of the industrial base will continue.

QUESTION B:

The current industrial base has the capability to provide adequate support if surged.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION B:

	3	5	4	3
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 20% Agree or Strongly Agree
46% Disagree or Strongly Disagree
Mean = 3.46
15 People responded

ANALYSIS OF QUESTION B: The undecided respondents had a definite tendency to lean toward disagreeing. As in the previous question, the timeliness of results was questioned. By its very definition, surge implies a rapid increase in the chosen components. Several of the respondents pointed out that surge capability is not built into the contracts. The Tube-launched, Optically tracked, Wire-guided (TOW) program was the only exception noted, and that program may be dropped in the near future. Since the surge capability is not built into the contracts, it can not be automatically assumed it exists to any significant extent. Additional funds early in a potential crisis would offer a way of significantly increasing surge capability.

RESPONDENT'S COMMENTS:

Many battle critical items have no surge capability!

The TOW missile is the only program with a surge capability; and that could be going down the tubes shortly.

I disagree based on 1) our current global, war scenario and 2) the government doesn't have the data down to the 5th or 6th vendor tier, so they can't identify single source or foreign dependent items.

Given enough time I agree. But we can not do it rapidly.
If time becomes an issue I would have to strongly disagree.

Gradual replacement of allied losses, yes. But we don't
have the capability to react to a short warning scenario.

I'm undecided, but supporting a surge would be easier
than a mobilization.

It depends, and that's where GMR comes in. If you take
early steps then the industrial base can surge. But if you
don't take those steps to buy long lead time items,
additional test equipment, and other industrial preparedness
measures then you couldn't surge.

Without additional investment in the industrial base, I
strongly disagree.

QUESTION C:

Which of the following would most limit mobilization of the industrial base. Please rank order the following items from the most constraining (1) to the least constraining (8, 9, or 10).

- _____ Appropriations
- _____ Dependence on foreign sources
- _____ Inadequate planning
- _____ Infrastructure (transportation, electricity, water)
(communications, etc.)
- _____ Lack of basic industry
- _____ Lack of trained workers
- _____ Lack of tooling
- _____ Raw material availability
- _____ Other (please specify) _____
- _____ Other _____

RESULTS OF QUESTION C: See Table 8.

ANALYSIS OF QUESTION C: Table 8 shows a summary of the varied answers. Respondents did not have to rank every factor, and they were allowed to give several factors the same ranking if they so desired. The rankings are intended to show the relative importance of the factors; they are not ordinal and are not intended to reflect values.

Depending on the scenario, any of the factors listed under answer c. could potentially be limiting to an industrial mobilization. Only two of the factors were not mentioned as being the number 1 problem: infrastructure and raw material availability. Both of those factors were fairly consistently ranked as relatively unconstraining. The means (i.e. average) shown in the table give a general idea of the relative importance a factor was given by the group of experts as a whole. Factors proposed under the "Other" category include:

- Parts and components from the subcontractor base due to a lack of capacity at that level (ranked 1).
- Current DOD procurement policies (ranked 9).
- Environmental laws/regulations (unranked, also ranked 2).
- Failure of will to take action (ranked 1 by two

respondents).

- Timing/decision to act (ranked 4).
- Repair vs production capability (ranked 5).

The supplemental comments largely stressed foreign dependence and a lack of sub-tier knowledge; both of which are an intertwined problem.

TABLE 8

RANK ORDER RESPONSES FOR QUESTION 2 C.

	# OF TIMES RANKED AS											
	MEAN	1	2	3	4	5	6	7	8	9	10	11
Appropriations	6.23	2	1		1			2	5	1	1	
Foreign dependence	3.73	3	3	2	1	2	2	1	1			
Inadequate planning	3.57	3	2	1	3	3	1	1				
Infrastructure	6.30		1	1	1	1	3		4	2		
Lack of basic industry	4.00	3	1	2	1	4		3				
Lack of trained workers	3.66	2	3	3	4		1	1		1		
Lack of tooling	2.46	6	2	3	3		1					
Raw material availability	6.00			1		4	3	3	2			
Other	N/A	3	1		1	1				1		

RESPONDENT'S COMMENTS:

Dependence on foreign sources, lack of trained workers, and a lack of tooling are the three key issues.

In effect what I'm saying is the long lead time stuff would be the problem.

Given enough time (e.g., months/years), we could mobilize or surge to a significant degree.

The industrial base was in trouble even during the Reagan buildup. If it were in trouble then, it's really in trouble now. No one knows the extent to which the base will be diminished in five years when the current six year defense program runs out.

The number one constraint to any increase in production right now is really the subcontractor base. Foreign dependencies and sources don't worry me, unless those sources are vulnerable/unstable and we might lose access to those sources. Another concern in that area would be if we were losing a critical technology and our capability to manufacture it. We are, however, getting beyond the expectation of doing everything on our own.

To some extent foreign sources help resolve problems of a lack of domestic industry. In other words I view foreign dependence as a long term problem that could, over the short run, actually be a boost to the U.S.

We just don't spend money on mobilization; we don't build excess capacity into our requirements. Planning is a problem because we don't get much below the prime contractor level.

TOPIC 3: MOBILIZATION PLANNING

QUESTION A:

DOD operational guidance and plans focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION A:

3	8	3	1	1
---	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 69% Agree or Strongly Agree
12% Disagree or Strongly Disagree
Mean = 2.31
16 People responded

ANALYSIS OF QUESTION A: The majority of respondents felt that the current plans and guidance are geared toward a "short war." however, most of those who felt this way do believe the focus is shifting towards a "long war" scenario. The "come as you are" short war is largely tied to the global war scenario. A global war might force the U.S. into early use of nuclear weapons because the global battle could not be supported logistically. As the global war threat apparently decreases, the longer war of lesser intensity raises the threshold of nuclear weapon use. Lower intensity equates to a lessening of reliance on nuclear weapons and the need to plan for longer duration conventional conflict. The more limited threat of regional war can be countered without "breaking the bank."

RESPONDENT'S COMMENTS:

Prior to the recent changes in the Warsaw Pact, I believe the focus shifted in the early 80's to a "Long War". The last Service to move in this direction was the Air Force.

But it's changing rapidly. Our operational plans have been nothing but deployment plans for the last 40 years. They have not been campaign plans so we haven't been able to

justify large stocks and sustainment. The reason we haven't planned for sustainment is because it broke the bank. So we said it'll be a short war or we'll go nukes.

Changes in warning time (which originally led to the "short war" emphasis), will lead to changes in this policy.

I agree, but I think it is changing; due more to developments overseas than new doctrine in the U.S.

The short war scenario with short warning time has been used to get dollars for force structure/procurement.

We're moving more toward Panama type operations. The plans are in a state of flux but leaning toward limited encounters.

It depends on who you talk to, the service responses are not consistent. The Air Force focus is on "come as you are," the Army looks at a longer war, and the Navy is somewhere in between.

This is done by default. Since large consumption is planned, that creates an inability to wage a longer type war. This may be changing; the JCS planning scenarios seem to involve smaller conflicts.

QUESTION B:

The present mobilization plans focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS FROM QUESTION B:

	5	2	6	2
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 33% Agree or Strongly Agree
53% Disagree or Strongly Disagree
Mean = 3.33
15 People responded

ANALYSIS OF QUESTION B: Mobilization takes time. Because of the time usually associated with mobilization, it is normally thought of in conjunction with a large scale long war. The majority of the respondents felt mobilization plans focus on a long war. This "disconnect" between DOD planning and mobilization planning was pointed out by many respondents. Perhaps this disconnect was in large part responsible for the deemphasis of mobilization as a national deterrent strategy. Several of the respondents who felt the short war was the focus said it was by default.

RESPONDENT'S COMMENTS:

If we mobilize, it will be for a longer war. The logistics guys are aware that we're going to run out of supplies, but the warfighters plan as if they can fight indefinitely.

The short war view is more dominant. But, it depends on whose viewpoint you're looking at. The operators focus on a short war scenario, industrial base planners tend to take a longer view.

This is one of the disconnects that we had in terms of people's willingness to provide funds. The mobilization plans themselves dealt with a long war scenario but in a short war context they simply weren't very attractive.

Again, this is done by default. If early action is taken on ambiguous warning then the base would be in a better position to support a long war.

They're not supposed to, but realistically they do.

Well - sort of - mobilization is inherently a long process that is viewed as a major escalation in action/reaction.

Many Operations Plans (OPLANS) for large scale conflicts and exercises tend to support the short war. Industrial mobilization planning, as well as civilian agency planning, looks more to the long war.

There is an inconsistency in planning. The JCS is looking at a different scenario than the mobilization planners. Mobilization planners need to provide the security planner with the timeframes required for effective mobilization action.

We don't have any scenarios right now. They're developing a portfolio of scenarios that are focusing on longer campaigns. But the Defense Guidance (DG) doesn't include any scenarios at this point. The sudden, massive short war is no longer favored. Everyone seems to agree that we'll have one, two, perhaps three years to prepare for the next major war. The Warsaw Pact is nonexistent as a military threat. It would take a combination of nations 1-2 years to launch a major decisive attack against the vital interests of the U.S.

Mobilization and "short war" are opposites. This is why the GMR concept has achieved the support to the degree it has.

Most of the planning revolves around the "D to P" concept. Traditionally industry was not relied upon until about 180 days into the conflict. We had a divergence when the operators were planning against the short scenario and we got into the problems in the 1970s that we did.

[Author's note: "The D to P concept, in its simplest terms, can be defined as a logistics planning concept under which supplies on hand at the beginning of a war must last until wartime production equals wartime consumption. "D" day is the day the war starts, and "P" day is the day that the production base is producing as many items per days as are being consumed." (Grosshans:16)]

We're still living on the basis of traditional planning which focused primarily on a long drawn-out conflict or a nuclear conflict; certainly not the anticipated regional conflict.

QUESTION C:

Mobilization plans should focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION C:

	1	4	8	3
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 6% Agree or Strongly Agree
69% Disagree or Strongly Disagree
Mean = 3.81
16 People responded

ANALYSIS OF QUESTION C: Most respondents felt mobilization plans should focus on a long war, or at least a wider spectrum than just a short war. As has been repeatedly proven in history, wars have a strong tendency to last longer than predicted. Even when supporting a long war, there is a need to get quicker response from industry than is often planned.

RESPONDENT'S COMMENTS:

They should look at the full spectrum. But, mobilization planners should get off of the three year concept and look at one year. Industry can provide results in 6-8 months, although the timeframe varies by industry and scenario.

There is too much disruption to the total industrial base, not just defense, during mobilization for it to be focused on the short war.

A regional conflict would fit into the statement better than "short war."

There have really been very few short wars, especially in our history.

They should focus on the reality that all of the force structure is not following. They need to support the

readiness as well as the sustainability objectives of the military services.

All wars are long. When the Iran-Iraq war broke out everyone predicted it would last one month because both sides were ill prepared, but it lasted eight years.

Planning is cheap. Different scenarios stress different capabilities of the U.S. mobilization base. Mobility, force structure, sustainment, etc., will be stressed differently depending on the threat, area of operations etc.. We need to also focus on a conflict where no national emergency is declared; increasing the industrial base output may be much harder if no national emergency is declared.

Some level of long war planning is necessary for deterrence, alliance solidarity, and as a hedge against a long war. But there could also be a growing need for "quick-hitting" mobilization for regional, short conflicts.

Surge can be for short wars, but not mobilization.

The question is where do you put your marginal dollar, with the worse case or the most likely?

QUESTION D:

Current mobilization plans attempt to counter the full spectrum of scenarios including the "worst case" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION D:

	9	1	6	
--	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 56% Agree or Strongly Agree
37% Disagree or Strongly Disagree
Mean = 2.81
16 People responded

ANALYSIS OF QUESTION D: U.S. mobilization plans have traditionally countered primarily the worst case. The tradition was reinforced by the Defense Guidance emphasizing the European centered global war scenario. The respondents were split on whether the current mobilization plans attempt to counter the full spectrum of scenarios. Some of the respondents felt the strong emphasis on the worst case does not allow countering the full spectrum. Others felt the preparations for worst case addressed the needs of the rest of the spectrum. Three of the respondents who felt current plans do not address the full spectrum stated there is movement in the direction of the full spectrum.

RESPONDENT'S COMMENTS:

Only one scenario is addressed, the worst case scenario. We need to look beyond the "worst case," and address all the possibilities.

But it is not a perfect world. There are personnel, ADP, data, and time limitations. The Office of the Secretary of Defense and the Joint Staff are trying to answer the scenario issue now, but it is a moving target.

At least in the Air Force, we're trying to change to a capacity analysis, vs. the specific planning of the past (i.e. planning against the mobilization requirements). We

should be able to identify the capacities of the contractors we deal with, and how certain investments like tooling and test equipment would increase those capacities. In line with GMR, as a requirement is identified it is compared to the current capacity, and the cost and time of improvements are identified. So we no longer plan against a specific individual requirement. We concentrate on constraints and bottlenecks now, at least with the large contractors.

Clearly, worst case is the goal but reality is much less. The supposition is that the worst case will accommodate the lesser. The problem is that surge is probably the worst case from a standpoint of what you would actually be able to accomplish. Without a declaration of emergency it will be difficult to get away from business as usual (i.e. environmental laws and impact statements).

We almost always exclusively focus on the worst case. This exclusive focus is changing to include a wider spectrum.

We're still using the "on/off switch" concept. We really aren't into this graduated mobilization concept at all.

I agree, but the principal investment should be in the most likely contingencies.

Our requirements deal only with the worst case, which is a real problem.

They are beginning to address the full spectrum.

They do not counter the full spectrum.

QUESTION E:

Mobilization plans should attempt to counter the full spectrum of scenarios including the "worst case" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION E:

3	11	2		
---	----	---	--	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 87% Agree or Strongly Agree
0% Disagree or Strongly Disagree
Mean = 1.93
16 People responded

ANALYSIS OF QUESTION E: There was overwhelming agreement among the respondents that mobilization plans should attempt to counter the full spectrum of scenarios. Several respondents felt that as the spectrum of interest widens, the level of detail should be less. Flexibility will be a key to reacting to a wide variety of scenarios.

RESPONDENT'S COMMENTS:

If you can do the worst case, the rest (in theory) should be easy. However, in some scenarios, the requirements may be greater than for what is needed under a "worst case".

GMR covers the full spectrum.

I don't want standing plans. I want the capability to respond rapidly to a wide range of emergency situations.

It's harder looking at the full spectrum than looking at the worst case. But, the level of planning should not be as detailed as people try to make it.

Mobilization potential should be looked at for all scenarios.

It really comes down to what do you believe in your heart of hearts is the probability of a global war centered in Europe.

QUESTION F:

The U.S. Government currently has in effect adequate industrial mobilization plans.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION F:

	2	3	6	5
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 12% Agree or Strongly Agree
69% Disagree or Strongly Disagree
Mean = 3.87
16 People responded

ANALYSIS OF QUESTION F: A large majority of the respondents felt that the U.S. industrial mobilization plans are not adequate. The respondents generally favored additional resources and a more realistic approach to the start of mobilization activity. Those respondents who felt the industrial mobilization plans were adequate felt our experience from the last 30 years has been incorporated into the planning and could be implemented given the right people.

RESPONDENT'S COMMENTS:

Without additional resources, we cannot achieve the level of planning needed. Whatever we plan for, the execution of it will not follow what we planned. That's a basic fact of war or conflict; just like Operation Plans (OPLAN) development in deliberate planning will not match what will happen during crisis action. Planning does at least put the focus in the ballpark.

I don't think they're in place. We're moving toward a more realistic 1990's mentality. We're poised on the brink of something new, but we're not there yet.

The concept of GMR is being developed, but certainly isn't implemented at this point. The plans on the shelf are based on the traditional concept.

We have 30 years of plans that have been reviewed and reviewed. I think you've got an understanding of mobilization, authorities, and procedures that, given the right talent working for the government, we could implement pretty effectively.

The industrial planners in the Defense Department say it's a piece of cake, they know how to do this. I have never asked to see a plan, and I have never asked them to explain it to me.

The current plans don't take advantage of early warning. There has been a national emergency/M-Day fixation where nothing can start until a national emergency is declared and M-Day is established.

[Author's note: M-Day is the day on which mobilization of military units is to begin.]

DOD commits few resources for serious mobilization planning.

Although planning is cheap, the government isn't willing to spend the pennies it takes to develop the mobilization plan we may need. Even getting the industrial base data we need is an arm wrenching experience. We can't even tell industry what our requirements will be.

For some items I agree. Major end items which are complex in nature will probably have an analysis of the industrial base that supports them. But that is all they'll have.

DOD has a hard time addressing mobilization, so do the civil agencies.

QUESTION G:

The U.S. Government has in being an adequate control structure for industrial mobilization.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION G:

	2	3	9	2
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 12% Agree or Strongly Agree
69% Disagree or Strongly Disagree
Mean = 3.68
16 People responded

ANALYSIS OF QUESTION G: A large majority of the respondents felt the mobilization control structure was inadequate. The structure in place by the middle of WW II was the most frequently used example of a strong centralized structure. The respondents did note that peacetime functioning under such a centralized effort may not be realistic in a democracy such as ours. The importance of having a clearly defined structure in place prior to a crisis was mentioned, as was the fact the current structure is not well defined.

RESPONDENT'S COMMENTS:

If we were serious about mobilizing (for instance a WW II scenario), we'd set up a completely different structure from what we have now. Possibly if we had less than a WW II type scenario, then the structure we have may be adequate.

Past mobilizations have been controlled by strong central civilian management (i.e. WRB - War Resources Board, or the ODM - Office of Defense Mobilization). Those things are not currently in place. FEMA is essentially a lightweight in terms of its ability to direct and deal with other agencies, especially DOD.

We would do what we've always done in the past - reorganize in the face of a crisis. We don't have an organization that could handle a major mobilization now. In

a national emergency the president will appoint a mobilization czar or czarina who'll need a staff that's ready to roll; that staff does not exist. We need the NSC to say "...so and so is going to be our staff in a national crisis. I want you to support them in their peacetime planning." Therefore, FEMA not being a department, not being an equal, has a very difficult time getting people to pay attention to them. If the NSA to the president would say, "Yes, I believe mobilization is going to be more important in the future. The Director of FEMA has been charged with getting the mobilization organization and planning going..." then you'd see things happen. But that hasn't been done.

All the planning we do with industry deals with production levels and timeframes. Very little is written on the execution side.

The relationship between DOD and other Federal Agencies (e.g, FEMA, Department of Commerce, etc.) is still maturing in this area. Turf battles still develop.

I don't believe the federal government has any control, especially based on the idea of a free market system. It would be counterproductive to try to provide any control over industrial productivity, whether it be defense industries or not. I don't see a place for the Emergency Planning Policy Coordinating Committee in the control structure of industrial mobilization. The Defense Priorities and Allocation System, which is controlled by Commerce (with the coordination of FEMA), is a proven system.

There has been talk of how we have all of these congressional things on the shelf, but no one has been able to list what any of those actual legal things are, at least they haven't shown me.

The Policy Coordinating Committee (PCC) for Mobilization Preparedness and Emergency Planning is the single interagency group chartered with the management of mobilization preparedness. The Defense Department feels it's going to manage its industrial base regardless of what sort of interagency group you have. Other agencies, outside the industrial base (like Health and Human Services - HHS) will also be affected, but it's not clear to many of the agencies in Washington that the PCC would be able to provide the necessary guidance. So the defense industrial side is probably okay. But the other agencies are in disagreement.

It took the U.S. over three years (after Pearl Harbor) to develop an adequate control structure; but its been

dismantled. The key is people/organizational structure but many government agencies have only "a shell."

In peacetime we're never going to have a mobilization czar. So, we need to structure our plans in a way that helps us be prepared. The structure will also need to be strengthened in some way; something along the lines of the National Security Resource Board (from 1947) that operated out of the White House.

We're not doing this in peacetime because our capitalistic system is basically a hards-off system. There is no government industrial policy per se. Because there is no peacetime structure, a control structure would have to be established after a crisis started. In wartime we'll need something like a War Production Board, but I can't see them establishing that in peacetime.

We have structure in place at FEMA, Commerce, JCS etc. but they've never been utilized. I'd like to think that they'd work, but I don't know. Once there is political consensus, if the structure is inadequate it can be adjusted.

QUESTION H:

The U.S. Government adequately promotes private firm involvement in industrial preparedness planning.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION H:

	4		10	2
--	---	--	----	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 25% Agree or Strongly Agree
75% Disagree or Strongly Disagree
Mean = 3.62
16 People responded

ANALYSIS OF QUESTION H: A large majority of the respondents felt the U.S. Government does not adequately promote private firm involvement. A recurrent reason in the responses is the lack of incentive. Industry is profit oriented, and the government has to make industrial preparedness planning worthwhile to it. This is especially the case when the lowest bidder is awarded the contract. The current system of planned producers really doesn't guarantee either industry or the government what they want. Most industrial preparedness planning seems to be limited to current contractors. There are several exceptions which involve major portions of industries; most notably in telecommunications, energy, and shipping. (The Computer chip industry and Sematech, which was not specifically addressed by the respondents, is another notable exception). Several respondents felt the adversarial relationship between government and industry will have to improve, and government will have to take the lead. Limited funds in future years may make improvement in this area unlikely.

RESPONDENT'S COMMENTS:

There's really no financial incentives for a contractor to do industrial preparedness planning. If the government wants planning, they're going to have to pay for it.

It's a paperwork effort right now; there aren't any dollars.

We plan with current contracted producers during peacetime. We don't do any planning with companies that don't supply us in peacetime. The new planning form that we are testing will hopefully give us better information from our present contractors.

In some areas, like telecommunications and shipping, there is adequate involvement.

There are too many mixed signals being issued as to protection of the domestic industrial base (U.S. & Canada) as compared to international programs. If we in government are confused, how can industry do long term planning?

Much of what the government should be doing is reducing impediments for industrial participation, and the government isn't doing that.

We need a better relationship with industry. When awarding contracts in peacetime, we need to address surge objectives.

We don't involve firms, and there is no funding or high level support.

I would like to see defense industries accept the developing theory that economic security is as important as military security. And that they should do some long time planning to allow their companies be full fledged members of the defense industrial base instead of short term bottom line accounting.

In certain commodities (munitions, tanks, personnel carriers) we establish planned producers. In terms of things the Air Force buys there is a lack of interest in detailed Industrial Preparedness Planning (IPP) on the part of both government and contractor. That will change to a certain extent due to the 1989 Defense Authorization Act.

The government is addressing three key infrastructure industries. In telecommunications we're light years ahead of the rest of industry. We've started working the energy industry. We're not there yet with transportation.

There is an adversarial relationship. We have trouble getting our programing, acquisition, and planning people together in order to present a cohesive effort. So we haven't done our best to get involvement on the part of these companies and limit the amount of bother that we put them through to get them to do it. It's hard to see what

benefit private firms get from it. The DD Form 1519 offers no incentive to be a planned producer, nor does it guarantee the government dedicated capability. We also retard civilian use of technology for no good reason.

It's a resource problem.

While we have the ability to perhaps influence, really give our point of view to the private sector, the bottom line is still profit and profit is not a dirty word. Industry wants to know what they can be firmly given that they can apply assets to in order to make a profit. And we haven't been able to do that.

But we try to get them to do everything for nothing. We're always hoping that industry will take care of us.

QUESTION I:

The pending reductions in defense appropriations will significantly increase the strategic importance of mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION I:

9	5	2		
---	---	---	--	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 87% Agree or Strongly Agree
0% Disagree or Strongly Disagree
Mean = 1.56
16 People responded

ANALYSIS OF QUESTION I: The respondents felt that the pending reductions will significantly increase the strategic importance of mobilization preparedness. The strength of that conviction ranges from belief that mobilization preparedness will become the critical factor in national strategy to it increasing in relative terms. Several undecided respondents pointed out that the decrease in appropriations comes at a time when the threat is decreasing and warning time is increasing. It appears, as with several of the previous questions, that everything is relative to the threat.

RESPONDENT'S COMMENTS:

I'm undecided. It's true that the appropriations are decreasing, but so, too, are the threats. The planning scenarios will now involve smaller conflicts. We're also expecting warning time to increase.

Secretary of Defense Cheney, Admiral Crowe, and General Powell have said that we're going to have to rely more and more on mobilization. The policymakers must back the commitments with willingness to support mobilization items in the POM; but I haven't seen that support yet. There's a lot of rhetoric, but not a lot of action.
[Author's note: A POM is a Program Objective Memorandum.]

It is, "The recommendation of the service secretaries and heads of DOD agencies to the Secretary of Defense on proposed application of their portion of DOD appropriations (AFSC Pub 1:333)."]

The industrial base and its supporting infrastructure become the critical factor in national security strategy.

It depends on where the observer feels we are on the warning time timeline. With either very little warning time or a very long warning time, mobilization preparedness is of low strategic importance.

Less acquisition will lead to a smaller industrial base which will increase the importance of preparedness.

A recent National Security Emergency Preparedness (NSEP) paper sent to the NSC alludes to mobilization preparedness becoming more important.

Our new directives we're working on will look at industrial preparedness and not just industrial mobilization. We no longer divorce peacetime emergency planning from war responses. There is not a linkage; industrial preparedness planning is becoming industrial base planning.

Pending a long term assessment as to the threat, this view is being expounded more and more by senior OSD & Joint Staff personnel.

It will increase relative to its prior importance ---- it will not necessarily become more important than strategic weapons etc.

There needs to be a focus on what the exact effects and results of the reduced appropriations will be.

QUESTION J:

The pending reductions in force structure will significantly increase the strategic importance of mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION J:

7	6	3		
---	---	---	--	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 81% Agree or Strongly Agree
 0% Disagree or Strongly Disagree
 Mean = 1.75
 16 People responded

ANALYSIS OF QUESTION J: The respondents felt the pending reductions in force structure will significantly increase the importance of mobilization preparedness. Democracies have long depended on mobilization vs large standing armies. As the size of the U.S. forces decreases, there will be a corresponding increase in the importance of mobilization; especially if the previous major threat posed by the Soviet Union only lessens and does not disappear.

RESPONDENT'S COMMENTS:

Force structure is driven by threat.

The key issue will be if production of material can match the production of trained personnel to use that material. The Army found out about 3 years ago that they were planning to field more tank battalions with people than they could provide with actual tanks. Not a bad approach when you think about it.

I agree, assuming that the Soviet threat doesn't go away, it just involves longer warning times. Mobilization preparedness means having accomplished adequate planning that allows for rapid transitions. You're not going to be able to achieve a level of mobilization "readiness." (i.e. a garrison state).

All democracies have depended on mobilization strategies. No democracies in peacetime can maintain strong enough standing forces to deter attack on its interest. Although the U.S. has since the Korean War maintained what we thought were sufficient forces-in-being and logistics in place to protect our interests or deter attacks on our interests. With lesser forces but the same interests in a dangerous, uncertain world we'll have to rely on mobilization.

QUESTION K:

Will your department/branch of service experience a significant increase or decrease in mobilization planning in the 1990s? Please pick one.

INCREASE DECREASE NO CHANGE NOT APPLICABLE

RESULTS OF QUESTION K:

5	2	6	2
---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 33% Believed there will be an increase
13% Believed there will be a decrease
15 People responded

ANALYSIS OF QUESTION K: The respondents were mixed in their beliefs whether there will be a significant increase or decrease in mobilization planning in the 1990s. Despite the increase in strategic importance of mobilization in the 1990s, the experts are not confident that an increase in planning will occur. Several respondents noted they need more funds and they will be requesting more funds, but they may not be forthcoming. Several felt the funding level may actually go down. The funding that is provided may be geared more toward industrial base planning than wartime preparation.

RESPONDENT'S COMMENTS:

The first order of business is getting the relevant agencies and the right people together to decide what questions are going to be asked. There have been more than enough studies. You need continual commitment.

Who can say?

Most resources will focus on the peacetime mission of procurement/supply. There will be less dollars for exercises, training, war reserve stock, and mobilization planning.

I'm going to say no change, but it's hard to gauge the effects of manpower cutbacks.

Obviously Office of Management and Budget (OMB) decisions will affect the extent of the increase, but our agency is committed to increase in FY 92 requests.

There should be an increase. That's what we hope to do with the National Security Directive. We'll have the President state how important it is, and then we're going to go to work to make sure people pay attention to what he says.

There is not a lot now; I don't expect any real change. Our primary emphasis is actually on industrial base planning, which supports peacetime efficiencies and capabilities to produce our current programs. We need U.S. industry to be competitive. If they're not competitive, then we lose the industrial capability, and it goes offshore.

We're currently reevaluating what we should be doing in industrial base planning. We're looking at going back to making the planning effort an aid for program managers, so we don't always look at just the eventuality of a war.

What we're seeing right now is no change. But with the cuts across the board there's likely to be a decrease. I don't foresee an increase in planning or preparedness even though we've increased emphasis.

I see no real changes to the planning for now. With the publication of the next Joint Strategic Capabilities Plan (JSCP) in 1991, we (the services) will be given our guidance.

They'll probably be no change even though we need to increase. I can even see us decreasing.

QUESTION L:

Will your department/branch of service experience a significant increase or decrease in mobilization preparedness in the 1990s? Please pick one.

INCREASE DECREASE NO CHANGE NOT APPLICABLE

RESULTS OF QUESTION L:

3	5	4	4
---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 19% Believed there will be an increase
31% Believed there will be a decrease
16 People responded

ANALYSIS OF QUESTION L: As with the previous question dealing with planning, the respondents were mixed in their beliefs whether there will be a significant increase or decrease in mobilization readiness in the 1990s. Despite the increase in strategic importance of mobilization in the 1990s, the experts are not confident that increase in preparedness will occur.

RESPONDENT'S COMMENTS:

Reality in terms of actual capability, given cutbacks, closures, etc. We're going to be losing industrial capability because people are going to be going out of business.

Within the entire government, relaxation of concern and a refocusing of resources to address many other problems will result in a decrease.

Traditionally there is an inability of planners to directly effect programs.

We will have less active firms producing for us, so there will be a decrease in capability. When you shut down a line you also lose skilled labor and break the learning curve so coming back up and supporting us will naturally take longer.

We're not overly prepared right now. It can't really get much worse and I don't see it getting a whole lot better.

QUESTION M:

Funding for mobilization planning is currently adequate.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION M:

	6	3	4	3
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 37% Agree or Strongly Agree
 44% Disagree or Strongly Disagree
 Mean = 3.25
 16 People responded

ANALYSIS OF QUESTION M: The respondents were mixed in their beliefs on whether the current funding level for mobilization planning is adequate. The largest block of respondents felt it was inadequate. While there was disagreement on the adequacy of the funding, waste or misuse of the funding was a common belief. The waste and misuse reportedly occurs at both the planning level and the preparedness level. Even if there is not an increase in funding, better focus and control of what is allocated may result in a stronger mobilization capability.

RESPONDENT'S COMMENTS:

Overall industrial base planning funding is inadequate. But I'm not sure increases are warranted given our inability to do a lot about the problems we find. Take the bearing industry as an example. We've identified it as a problem, but the industry is commercial and civilian dependent. We can't do much about them going offshore. Fixes of such a magnitude go beyond the DOD budget. The fixes come into national policy, tax code laws, investment incentives, things like that.

I agree it's adequate, but spending is diffuse, unorganized, and not integrated. We don't need more money, we need better control and plans.

I don't know if we have enough or not. There's money around, a lot of which is wasted. For example, everyone needs data, but everyone has their own nonlinked database including Commerce, DOD, JCS, Army, Air Force, etc. We need to get senior nonappointed people from each of those areas to identify common database needs.

In terms of mobilization for war it is adequate. But it is not adequate in terms of industrial planning for non-mobilization contingencies.

While it may have the support of planners and operators, the support from the budget community has never been strong. I anticipate that it will only get worse in future POM actions.

We can do the job with what we've got.

Few dollars are allocated for Industrial Preparedness Planning (IPP), and hardly any money is spent to assess other aspects such as transportation (civil), energy, or water. As an example, DLA has only 58 Armed Service Production Planning Officers (ASPPOs) to support the services IPP efforts, but DLA has over 200 lawyers!

Funding is not adequate, and most of what we get is wasted.

Within our department it is.

There's very little funding to collect industrial base data.

QUESTION N:

Funding for mobilization planning will need to significantly increase during the 1990s.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION N:

1	7	1	7	
---	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 50% Agree or Strongly Agree
 44% Disagree or Strongly Disagree
 Mean = 2.87
 16 People responded

ANALYSIS OF QUESTION N: The respondents were largely split along the same two lines of thought expressed in the previous question. One group says funding for planning will have to increase in the 1990s; the other group feels better use of allocated funds is the answer. Both this question and question m. addressed planning; as one respondent pointed out, planning costs are largely invisible. Questions o. and p. address the more visible preparedness funding.

RESPONDENT'S COMMENTS:

Only if the Threat Assessment points us that way!

Current funding levels are adequate as long as we utilize the funding appropriately.

It just needs to be rearranged.

I think we just need to do it better.

I disagree. Although we may need funding to consolidate the existing industry and program data.

The money doesn't need to significantly increase, but it needs to be better organized and the regulations and

instructions need to be more specific for what the reason is. We need a better foundation for what we're doing.

Planning costs are largely invisible.

QUESTION O:

Funding for mobilization preparedness is currently adequate.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION O:

	2	2	8	4
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 12% Agree or Strongly Agree
75% Disagree or Strongly Disagree
Mean = 3.875
16 People responded

ANALYSIS OF QUESTION O: The previous two questions showed split feeling on the adequacy of present and future planning funding. This question, as well as question p., shows more of a consensus on the inadequacy of present and future preparedness funding. The majority of the respondents felt that funding for current mobilization preparedness is not adequate. Investments will need to be made, and these investments will aid the responsiveness of the industrial base. Respondents pointed out that more money is spent in the area of preparedness than is often recognized. The priority of preparedness funds needs to be looked at in the context of other priorities and the overall budget.

RESPONDENT'S COMMENTS:

Streamlining of the peacetime acquisition process will help us in wartime. We're working on that streamlining now.

For the 92-97 POM, the Army was the only service that proposed any funds for industrial preparedness. DLA cut out almost their entire industrial base program, they didn't have any MANTECH, IMIP, anything. The Army's funding is minimal (for the Adventure Launching System only, no industrial preparedness funds were requested for any other Army program).

[Author's note: IMIP is the Industrial Modernization Incentives Program. As its name implies, IMIP is a program

that provides incentives for defense industrial base producers to modernize into emerging production technologies like computer assisted design, engineering, and manufacturing. IMIP grew out of the MANTECH program. MANTECH stands for Manufacturing Technologies. The goal of MANTECH was the identification of key enabling technologies that would benefit defense production (Harvey:40-41).]

Actual mobilization expenditures are substantially higher than is often understood. For example, sealift subsidies and the Ready Reserve Fleet are really mobilization investments. The Reagan Administration spent \$7 billion on sealift resources like cargo ships. Another example, the annual cost of the Strategic and Critical Materials Stockpile approaches \$1 billion when looking at the interests and holding costs we incur by not being able to sell it off.

I agree, but it's not adequately distributed. There's a lot of money, but it's not necessarily spent on the highest priorities. As part of the Mobilization Planning and Policy Review, the Policy and Coordinating Committee (PCC) is determining how the funds need to be allocated to better address priorities.

Based on our currently fielded equipment, we have problems with the industrial mobilization effort.

Investments in the industrial base could dramatically increase the responsiveness. But the priority of that has to be considered with the current budget constraints we have.

QUESTION P:

Funding for mobilization preparedness will need to significantly increase during the 1990s.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
3	6	5	2	

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 56% Agree or Strongly Agree
 12% Disagree or Strongly Disagree
 Mean = 2.37
 16 People responded

ANALYSIS OF QUESTION P: A majority of the respondents felt that funding for mobilization preparedness will need to significantly increase in the 1990s. As with the previous question, priorities are again mentioned. It is apparent mobilization preparedness should only be allocated an amount consistent with its priority from the big picture. Once funds are authorized, whether annually or when a threat presents itself, those funds will have to be carefully allocated.

RESPONDENT'S COMMENTS:

I agree, but I'm an industrial base advocate. Secretary Cheney and General Powell look at the big picture so maybe they're putting the priorities where the priorities need to be.

I'm not sure a significant increase would be called for across the board; some areas will probably require money.

Maybe we don't need it today, but we will need to spend it when a real threat comes about.

In order to get that increase we'll need to show the National Security Advisor (NSA) the risk of not spending that money and the benefits that can accrue if you do spend it. Most people agree we are taking some risk in cutting down our forces, although they don't agree on the degree of that risk. It's fairly easy to convince them that a cheap insurance policy you can take out is being well prepared to regenerate force in response to warning.

But I don't think it will happen.

It will be hard to justify the needed resources vs possible threats. Investments in force structure, training, and war reserve stock will be hard to come by.

We're not really sure of the threat, or the amount of warning time we're going to have. Our demands are much less if we are looking at less than a global war.

Better allocation of funds toward priorities may be the answer.

Much of the currently scheduled equipment will remain in production, which will ease mobilization planning.

TOPIC 4: GRADUATED MOBILIZATION RESPONSE (GMR)

QUESTION A:

The concept of Graduated Mobilization Response is a valid way to improve U.S. mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION A:

5	9	1		1
---	---	---	--	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 87% Agree or Strongly Agree
6% Disagree or Strongly Disagree
Mean = 1.93
16 People responded

ANALYSIS OF QUESTION A: An overwhelming majority of the respondents felt that GMR is a valid way to improve U.S. mobilization preparedness. Qualifications included the need to get it implemented in the first place, for good intelligence, and senior leadership resolve. One respondent indicated strong disagreement on the usefulness of GMR. Both pro and con positions will be amplified by the following questions.

RESPONDENT'S COMMENTS:

Given good intelligence and senior leadership resolve, it will be the only way.

I agree, but it is not a "be all and end all."

It provides flexibility through a continuum of response levels.

I strongly agree, if we can get it implemented. Both OSD and FEMA support costed option packages, but those option packages are not acceptable to the military services and are probably not acceptable to some of the federal departments.

QUESTION B:

GMR is being institutionalized via changes to: National security policy and strategy documents; and/or mobilization planning and program documents; and/or legislation.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION B:

3	9	1	2	
---	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 80% Agree or Strongly Agree
13% Disagree or Strongly Disagree
Mean = 2.13
15 People responded

ANALYSIS OF QUESTION B: A strong majority of the respondents felt GMR is now being institutionalized via written documentation. The wording of the comments clearly shows that the extent of that institutionalization is not all pervasive at this point. For the most part, what institutionalization has occurred has done so at a macro level sans implementation details. FEMA appears to be in the institutionalization forefront at this time. At this point, translating the concept into written documentation does appear spotty at best.

RESPONDENT'S COMMENTS:

Yes it is via Executive Order (E.O.) 12656, 44 Code of Federal Register (CFR), DOD Directive 3020.36, and exercise play. But it's in the early stages. The Air Force War and Mobilization Plan VI (WMP-VI) will also do this.

The words are appearing in legislation (The Defense Production Act revisions, Defense Authorization Act) and in terms of the National Security Emergency Preparedness (NSEP) policy review on graduated response.

I don't know, but I haven't seen any such legislation.

FEMA issued a GMR regulation in January of 1990, and will be issuing additional guidance in June. The Defense Production Act amendments also have language about responding to early warning.

Slowly! Bureaucracies move more slowly and in this case even more so because mobilization planning is not the hottest item in the world.

It's being institutionalized at the upper echelons of government, but it hasn't really penetrated down to the level at which it has to work. It may take three years for this penetration to occur.

We're trying to do it by both changing planning documents and demonstrating its usefulness by prototyping examples. A Middle East War prototype is currently being developed. It involves all of the services.

OSD Directive 3020.36, Assignment of Emergency Preparedness Responsibilities, does say we will have a GMR program. Because of the disagreement between the players the details haven't been worked out and we kind of put it in the "too hard to do" box last year and not really addressed it much over the last year. FEMA has moved on.

We're getting ready to do that, once DOD Directive 4005.1 is reaccomplished.

Staffing is underway in these areas, but has slowed down in the past six months.

Not in our department, nor in any other department. It is getting more attention and will be adopted in the future as a justification not to increase defense spending, that there will be more warning time, and therefore we can rely on this as adequate protection.

It is spotty at best - there is no DOD policy.

FEMA is an advocate and is trying to institutionalize it. DOD is also working on it. Other agencies are having problems because they don't know what option packages are for, nor what's in them; you can bet that Health and Human Services (HHS), Housing and Urban Development (HUD), etc., haven't a clue what's in them.

QUESTION C:

GMR will not require significant changes to the current mobilization statutes.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION C:

	7	3	4	1
--	---	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 46% Agree or Strongly Agree
33% Disagree or Strongly Disagree
Mean = 2.93
15 People responded

ANALYSIS OF QUESTION C: The respondents were split on whether or not significant changes will be required to the current mobilization statutes. Respondents of each viewpoint identified the key problem with the current statutes is their reliance on a declaration of national emergency. GMR is based on early action and many of those actions would be restricted until a declaration of national emergency. About half the respondents felt the current statutes will be sufficient will little modification required.

RESPONDENT'S COMMENTS:

Current statutes require that the president declare a national emergency - GMR must begin way before that in a focused and deliberate course of action.

The impact is still being determined!

The real problem is peacetime barriers to increasing production without the declaration of a national emergency. It gets back to the plausibility of acting on warning. The experiences of England in the 1930s demonstrate that people don't always act on warning. We are going to see a shifting of policy, conceivably towards mobilization but we're not going to see the resourcing of it nor are we going to see

some of the things put in place that would be required to make it practicably effective.

The "how to" manuals need to be developed, but the statutes are in reasonably good shape.

For the most part this is true. However there are still many provisions triggered by the declaration of a national emergency.

Right now, our statutes deal strictly with mobilization. When you move from peace to war suddenly everything changes. The current legislation is useless in terms of GMR implementation.

The issue for GMR is not invoking new statutes, the real thrust is the need to put waivers and caveats into the existing statutes.

I'm working on a piece of legislation now that would give the Secretary of Defense authority to reprogram funds without Congressional approval once we are in stage 2 of GMR. It will allow the Secretary of Defense to act quickly before Congress even acknowledges there is a threat.

We have adequate mobilization statutes, but they are spread over about 87 different laws. My great dream is to have a National Emergencies Act, similar to the omni-bus legislation which Canada just passed, which gives the head of state greater flexibility to act on early warning. Ours are geared in the main to the declaration of a national emergency. We need to get a list of actions that should be taken early in a contingency, and look at the feasibility of giving cabinet or sub-cabinet level people authority to act. We need more flexibility.

GMR can easily replace the current traditional plans using the same assets. The key issue in developing a GMR plan is developing a matrix of action. We are, however, reviewing the current authorities that the departments and agencies have. If they don't have the proper authority to carry out there responsibilities, we are recommending writing standby legislation. But there is an awful lot of standby legislation on the street already.

QUESTION D:

Key GMR concepts (authorities, organizational responsibilities, etc.) are clearly spelled out in written directives, policy letters, or memorandums.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION D:

	3	2	11	
--	---	---	----	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 19% Agree or Strongly Agree
 69% Disagree or Strongly Disagree
 Mean = 3.5
 16 People responded

ANALYSIS OF QUESTION D: The majority of the respondents felt key GMR concepts are not clearly spelled out. There is universal agreement that the details are not clearly spelled out. Several of the respondents, speaking for their agency/department, indicated they felt the concepts were clearly spelled out. Other respondents indicated that there is movement towards clarification of the concept. But overall it appears much more clarification of the concept is required.

RESPONDENT'S COMMENTS:

They are not clearly spelled out as of yet.

Because the impact is still being determined, the detailed guidance necessary in DOD directives is being slowed down.

GMR really has not been implemented within DOD. 4005.1 will have words in there about GMR, but in terms of any really detailed implementation, that has not happened yet.

Concepts only, not detailed actions.

The implementation of GMR is unclear at this point.

No they're not, but they're getting there. Right now we don't even have a DOD Directive. We tried two years ago but had three nonconcurrences. We're working on a new draft.

From our perspective the concepts are clearly spelled out. But the problem is the emergency planners in the civil agencies who normally don't deal in national security issues are having trouble visualizing what they should be doing. Proposed Presidential Guidance for the federal agencies will hopefully come from the mobilization policy review.

Concepts yes, how you do it, no.

GMR is not embedded in the processes and procedures. Where the word mobilization occurred we penned in the word GMR. We're not to the place where we've modified the documents so that we think GMR.

More needs to be done.

Many of the documents are still only out in draft form.

QUESTION E:

Key GMR concepts (authorities, organizational responsibilities, etc.) are well understood by your organization's mobilization planners.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION E:

	3	1	11	1
--	---	---	----	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 19% Agree or Strongly Agree
75% Disagree or Strongly Disagree
Mean = 3.62
16 People responded

ANALYSIS OF QUESTION E: A strong majority of the respondents felt GMR concepts are not well understood by their organization's planners. Those respondents who felt they were well understood, often caveated their comments with statements that indicated the understanding did not apply to all the planners in their organization. These results are to be expected, based on the previous question revealing that the key GMR concepts are for the most part not clearly spelled out.

RESPONDENT'S COMMENTS:

The has been kind of a sense of exposure but not real guidance. In terms of specifically who does what, it hasn't been developed or articulated.

Not as of yet.

Different people have different concepts of what GMR is. That's the reason we're doing the prototype.

We are aware of the concept and the focus it will bring. But until more guidance is formally issued, service incorporation actions will be limited.

Many planners are aware of GMR, but the application guidance has not been provided to them yet.

I agree at least at my level and one level below that We have not sent out any information to the field on GMR.

It's spotty. Some people do, some people don't.

Our office yes, but the rest of the organization doesn't understand GMR thoroughly.

The civil agencies outside FEMA aren't really in synch on this.

QUESTION F:

Key GMR concepts (authorities, organizational responsibilities, etc.) are well understood by your organization's mobilization policymakers.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION F:

	5	1	8	
--	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 36% Agree or Strongly Agree
57% Disagree or Strongly Disagree
Mean = 3.21
14 People responded

ANALYSIS OF QUESTION F: The respondents were split on whether GMR concepts are understood by their organization's policymakers. Some of the policymakers have come to grips with the general concepts, but very few are aware of any details. FEMA and OSD are notable exceptions. One respondent pointed out that many of the policymakers are political appointees, and the change in administration resulted in new appointees who have no knowledge of GMR.

RESPONDENT'S COMMENTS:

The policymakers are more in the dark than the planners. There's not due consideration given to resource implications and strategy. That's what we're trying to counter with GMR. If it looks like we're going to have to intervene somewhere, or an ally is going to need a lot of stuff, or if we are going to have to regenerate forces to increase deterrence, then here are the resource implications, here are the costs, and here is the time it's going to take if you start right now. Do these things and you'll be there at this posture in a year.

We really do not have enough to brief them on except for concepts and potential impacts.

There hasn't been that much written so I don't think anyone up there knows that much about it.

As a concept yes, but the details, no.

The Policy Coordinating Committee is the policy making organization for mobilization. FEMA and OSD understand GMR, but it's not clear to me that the other civil agency policymakers understand it.

GMR up to this point has been developmental. Once this guidance goes out and is attached to the Defense Mobilization Order (DMO) and the prototype for the Department of Energy (DOE), then we'll begin to get more of an understanding of what GMR is all about.

It's not clear what requirements, other than the already received general guidance, will be placed on the services.

With the change in administrations, probably two-thirds of the policymakers have not heard the term GMR.

QUESTION G:

Adoption of GMR is strongly supported by your department/branch of service.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION G:

1	6	5	3	
---	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 47% Agree or Strongly Agree
20% Disagree or Strongly Disagree
Mean = 2.66
15 People responded

ANALYSIS OF QUESTION G: Approximately half of the respondents felt the adoption of GMR is strongly supported by their organization. Even though the concept is supported, there has been considerable resistance to on-the-shelf option packages. The details of the concept have held up GMR's implementation. The lack of written guidelines and the resultant lack of GMR awareness makes it hard to gauge support in many cases.

RESPONDENT'S COMMENTS:

There have been problems within OSD and the services, at least in the form we tried to implement 1 1/2 years ago.

The concept is supported. But the costed option packages for preset scenarios is not supported. It's especially not realistic to have the DOD plan for recoveries of private industry after earthquakes, hurricanes etc.. Naturally though we should have knowledge of the impacts.

It's spotty. Many people are unaware of the concept. We just haven't had enough written.

We do not know the bottom line yet!

We haven't disseminated the information real thoroughly yet. We also have not had a director for about the last nine months.

It is supported, but I can't say it's strongly supported.

OSD is like a group of separate fiefdoms. Just because one person at the top says it's a good idea and puts it in a regulation doesn't mean it pervades everyone in the system. There are some strong objections within the services to some parts of GMR. We feel it's silly to make a budget when you don't know what the scenario is. We could probably come up with a budget and reprogram for an actual event, in a week, maybe two. Standing packages would have to be kept updated, which is a process in and of itself. Plus the fact the services are not interested in having a tool someone in OSD or Congress can beat them over the head with. Congress/OSD might say if this is what you need when you're going to war, why aren't you buying it now?

There isn't real strong support, even in FEMA.

Its embraced. My three star strongly supports it.

QUESTION H:

GMR will significantly affect the way your department/branch of service plans for mobilization?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION H:

	7	3	3	
--	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 54% Agree or Strongly Agree
23% Disagree or Strongly Disagree
Mean = 2.69
13 People responded

ANALYSIS OF QUESTION H: The majority of the respondents felt that GMR will significantly affect the way they plan for mobilization. Organizations that were on the ball and have been incorporating GMR concepts into planning may not be significantly affected. One respondent pointed out the purpose of GMR is a rationale for better use of the current industrial preparedness planning, not as a driver of change. If GMR is to be successful, organizations will most likely have to significantly change the way they plan. If for no other reason than GMR includes prewar emergency planning, which past mobilization planning really did not address. As a respondent pointed out earlier, it's not as easy as going through your plans and crossing out mobilization and inserting GMR.

COMMENTS:

The way that GMR is moving led me to agree.

If implemented, I agree it will significantly affect us.

We are now trying (as we have for the last three years) to incorporate GMR concepts into our planning. So the change will not be significant.

GMR is a rationale for better use of current industrial preparedness planning, as opposed to a driver for change.

Yes, but the term mobilization should be replaced with the more inclusive emergency planning.

An official policy of GMR will provide more focus and enhance the planning, but the concept of GMR has been in our planning all along.

We've already switched to capacity analysis. Within the contractors' capacity we can be fairly accurate. Beyond that capacity we'll have to rely on macro models. Those models need a whole lot more effort and refinement.

DOD won't be affected greatly. Most of the impact will be in the civil agencies.

QUESTION I:

Within your organization, adequate funding will be provided for the development and testing of GMR.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION I:

	5	6	2	
--	---	---	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 38% Agree or Strongly Agree
15% Disagree or Strongly Disagree
Mean = 2.76
13 People responded

ANALYSIS OF QUESTION I: The respondents were split between believing that adequate funding would be provided and not sure if adequate funding will be provided. Funding for the development and testing of GMR involves a relatively small amount of money, but even that amount will not be provided unless mobilization preparedness is clearly supported as a national priority.

RESPONDENT'S COMMENTS:

With the POM discussions going the way they are, GMR is the least of our concerns.

If we get a strong policy pronouncement on mobilization then maybe we'll deal with GMR. GMR won't become important until mobilization becomes important.

The funding won't be a heavy burden on anybody.

JCS exercises are the best forum for testing. Internal Air Force testing is not required.

We'll do as best as we can.

Is adequate funding ever provided? In general, I agree.

QUESTION J:

You are familiar with the GMR related problems identified in after-action reports on PROUD SCOUT 88?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS FROM QUESTION J:

1	6		9	
---	---	--	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 44% Agree or Strongly Agree
56% Disagree or Strongly Disagree
Mean = 3.06
16 People responded

ANALYSIS OF QUESTION J: See question K below.

COMMENTS:

What are they?

QUESTION K:

You are familiar with the GMR related problems identified in-after action reports on and GLOBEX 89?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION K:

1	5		10	
---	---	--	----	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 37% Agree or Strongly Agree
63% Disagree or Strongly Disagree
Mean = 3.18
16 People responded

ANALYSIS OF QUESTIONS J AND K: Comments were not expected for questions J and K., but the comment "What are they?" sums up the majority position. A surprising majority of the respondents were not aware of the GMR problems identified in these key exercises. Better dissemination of after-action reports is apparently needed.

QUESTION L:

GMR related problems identified in PROUD SCOUT 88 have been corrected.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION L:

			8	
--	--	--	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 0% Agree or Strongly Agree
 100% Disagree or Strongly Disagree
 Mean = 4.0
 8 People responded
 8 People were unaware of the problems

ANALYSIS OF QUESTION L: Of those familiar with the results of PROUD SCOUT 88, there was universal agreement the identified problems have not been corrected. Similar problems were identified in a more recent JCS sponsored exercise, PROUD EAGLE 90. One respondent pointed out that exercise problems do not necessarily translate into real problems. Artificial exercise peculiarities aside, there is much that can be learned from exercises (but only if you are aware of what happened in the exercise!). Several important unsolved problems include: insufficient data, on-the-shelf option packages, and getting people to act on ambiguous warning.

RESPONDENT'S COMMENTS:

There are some (e.g., supplemental budgets) which are still being questioned.

Exercise problems do not always equate to real problems if the balloon actually goes up. To a certain degree those problems identified in after-action reports are problems of the exercise as opposed to problems one would encounter in an actual situation.

The serial exercises showed that we did not have the ability to rapidly determine what effect the expenditure of

X bucks would have on ability of the base to surge. Although the problems have not been corrected yet, they are in the process of being corrected.

For GMR to work, you have to take early action. In both Proud Scout and Proud Eagle, you couldn't get people to take early action. Secondly, the service requirements and the production capabilities data were not available. Proud Eagle got into more real issues because the participants were hand picked.

The lack of available data is still the major problem. The macroeconomic databases used are too sweeping to direct specific fixes. The update of the IPP Manual will allow us to evaluate and develop option packages based on common data elements.

Many of the problems we had in Proud Scout 88 we saw again in Proud Eagle 90. Part of the problem was a poor game design for a GMR type response. The Proud Scout serial exercises did have a good GMR scenario: Joe Muckerman ran those and he did a super job, absolutely fantastic.

There is reluctance with regards to the advanced prepared packages. The other thing is how do you solve the political will to respond to ambiguous warning? I don't think we've got a good handle on that.

QUESTION M:

GMR related problems identified in GLOBEX 89 have been corrected.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION M:

	1		6	
--	---	--	---	--

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 14% Agree or Strongly Agree
86% Disagree or Strongly Disagree
Mean = 3.71
7 People responded
9 People were unaware of the problems

ANALYSIS OF QUESTION M: Of those familiar with the results of GLOBEX 89, all but one felt the identified problems have not been corrected. One of the services was prepared for the exercise. A problem that plagued this exercise and the two mentioned earlier, was the difficulty in getting people to think in a proactive vs reactive manner.

RESPONDENT'S COMMENTS:

There weren't any major problems. The War Resources Cell felt they were not responded to in the way they would have liked. The problem was that Globex 89 didn't really lend itself to GMR, so it was a game design problem.

They are in the process of being corrected. It's a whole new way of thinking to bring the resource dimensions of strategy in early. We've never done that before because of our reliance on the nuclear crutch. All future exercises will hopefully further develop GMR related lessons learned.

I was not involved in GLOBEX 89.

We may have been in a better situation than other people were. We had already done costed option packages and exhaustive studies so we had specific information on our precision guided weapon systems.

There are problems with mindset. People are thinking of mobilization in the old ways and they're not being innovative. They're not thinking of how they can correct the problems through relaxation of restrictions, etc.

QUESTION N:

Option packages must contain a cost benefit analysis that includes all of the following:

- - Costs of individual actions
- - Response lead times and
- - Feasibility of individual actions and the overall system

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

RESULTS OF QUESTION N:

1	11	1	2	1
---	----	---	---	---

TOTALS FOR EACH CATEGORY

SUMMARY STATISTICS: 75% Agree or Strongly Agree
 19% Disagree or Strongly Disagree
 Mean = 2.31
 16 People responded

ANALYSIS OF QUESTION N: A strong majority of the respondents felt that option packages need to contain those items listed under the question. Why then have costed option packages held up the development of GMR? From the services' perspectives, making up option packages ahead of time for hypothetical situations is not acceptable. They definitely will not support option packages which are frequently termed on-the-shelf, precanned, and hypothetical. The services will support a flexible process which would allow for the rapid development of option packages in time of actual contingencies. That is also the position the OSD is now taking; previously OSD had supported on-the-shelf option packages, at least from the services' perspectives. Since OSD and the services are apparently in agreement, institutionalization of GMR within the DOD should pick up speed. There will most likely be lingering problems due to a lack of industrial planning data, the level of cost detail the services want to provide, and the reluctance of the services to bare deficiencies in exercises.

From the federal department and agency perspective, the GMR development holdup has been a lack of guidance. FEMA has taken the lead by developing a prototype GMR plan and example option packages. Stronger support for costed option

packages is evident in the civil side of government.

The use of an option packages-type approach does seem to be a logical approach to everyday planning and longer term programming. Deficiencies revealed from such a system should be addressed and not hidden. If they rate a high enough priority they should be acted upon.

RESPONDENT'S COMMENTS:

Congress is very happy and excited about GMR. It's the first opportunity they've had to look at options with price tags on them. While early warning is a keynote of GMR, the thing Congress looks at is that it is a process by which we can lay costs on options. And their decisions are based not only on the reality of the situation, but also the costs involved. DOD has a problem with it because if you put costs on things, that may impact peoples' thinking about the budget for a particular program.

Without those factors listed, a decision maker can't make a judgement. Accurate costs are needed for the reprogramming of funds. But option packages were not originally developed for hypothetical situations.

Resources are not available to conduct the analysis envisioned.

Costed option packages don't need to be as detailed as the balance sheet of a company. General, accurate figures are sufficient.

How and when will these option packages be built is the big question.

Costed option packages have a very short life span and involve a hell of a lot of work, but are imminently do-able in a short period in an actual emergency. You need to have the process to generate the packages, not the packages themselves. The services will never support the pre-accomplished costed option packages even if they have all the guidance in the world.

In our business we have industrial preparedness measures (IPMs) which say we can increase production so much if we do this, and we can increase it so much if we do that. I would say we should probably do our planning like that every day and I certainly wouldn't object to having generic IPMs in option packages. But the IPMs shouldn't be based on a specific scenarios.

It's not easy to do on a lot of systems. The information will always be in a fairly gross form. About the best you can come up with is a ratio for how to spend your money. You need to be able to identify the 2 or 3 systems out of 10 that would give you a good return on your money.

We've had strong disagreements within our organization on the costed option packages. The services will support a broad perspective, but not one that specifically details all the costs. Response lead times and feasibilities should be included but not cost. You're going to run into disasters on cost.

The services are interested in creating option packages once an actual specific threat is identified. What we need now is the flexible process which will allow us to quickly develop an option package. The time and effort should not be spent on precanned packages. The logistics and financial areas were especially resistant to canned option packages. The concept of GMR is a good one, but I do not support having option packages on the shelf. I'm not sure exactly what the packages should contain, once we do prepare them. That level of detail hasn't been hashed out yet.

Emergency procurement budgets bare deficiencies in readiness and sustainment. The services are nervous about baring their readiness deficiencies in front of the OSD, NSC, and Congress. Therefore they have in the past nonconcurred on anything that smacks of an emergency procurement budget. I personally don't believe you need an emergency procurement budget, they are too perishable. What we're trying to get is the capability to rapidly develop one. We're interested in the process; how you determine requirements, how you determine the base's ability to provide those requirements, and then how do you communicate those requirements through FEMA to the other federal departments and agencies that have to support those requirements. That's why we're developing the Middle East Prototype to demonstrate how you develop costed option packages. If it would take you an inordinate amount of time to meet those requirements, then you have a strong argument for industrial preparedness measures, increase the stockpile, etc..

Option packages will be completed in general terms. The Secretary of Defense and Chairman of the NSC want to know how much it will cost, what the benefits are, and what the risks are if we don't do it now. As we learned in the Proud Scout serial exercises, reprogramming of funds will need to provide at least 50% of the financing during the earliest reaction to ambiguous warning. Reprogramming limits will need to be raised.

We need more costed option packages.

QUESTION 0:

Which of the following is the greatest constraint to the development of a successful GMR system? Please rank order from the most constraining (1) to the least constraining (8).

- _____ Defining triggering events
- _____ Funding
- _____ Implementation mechanisms for higher alert levels
- _____ Lack of support from industry
- _____ Lack of support from policy makers
- _____ Legislation
- _____ Other (please specify) _____
- _____ Other _____

RESULTS OF QUESTION 0: See Table 9.

ANALYSIS OF QUESTION 0: Table 9 shows a summary of the varied answers. Respondents did not have to rank every factor, and they were allowed to give several factors the same ranking if they so desired. The rankings are intended to show the relative importance of the factors; they are not ordinal and are not intended to reflect values.

The respondents did not all agree on which factor would be the most constraining. Two of the factors were not mentioned as being the number 1 problem: implementation mechanisms and legislation. The means (i.e. average) shown in the table give a general idea of the relative importance a factor was given by the group of experts as a whole.

Factors proposed under the Other category include:

- General apathy by planners (ranked 1).
- Lack of support from the planners because they don't understand the concept (ranked 1).
- Accepted process for the development of option packages (ranked 1).
- Execution Process (ranked 1).
- Issuance of credible intelligence (ranked 2).
- Defining actions at various levels (ranked 3).

The supplemental comments did not stress any one area.

TABLE 9.
RANK ORDER RESPONSES FOR QUESTION 4 O.

	# OF TIMES RANKED AS								
	MEAN	1	2	3	4	5	6	7	8
Defining triggering events	2.25	6	1	2	2	1			
Funding	3.30	1	4		2	2	1		
Implementation mechanisms for higher alert levels	3.60		2	4	1	2	1		
Lack of support from industry	5.10	1			2	1	5	1	
Lack of support from policymakers	2.11	4	2	2		1			
Legislation	4.33		2	1	2	2	1		1
Other	N/A	4	1	1					

COMMENTS:

We've got the full support of the intelligence community so triggering events will not be a problem. The major funding will come when it's appropriate to act. The key is the ability to develop options which are appropriate and in a format acceptable to decision makers. People are uncomfortable acting on ambiguous warning. They will act if you can present actions that make sense to accomplish. The only way we've reacted in the past is to move forces around.

It's not a well thought out idea. Consider this. You're at a stop light. It says the speed limit is 55 MPH beyond the stop light. The light turns green and you accelerate the car, easing back as you hit 55 MPH. You come to a second stop light. The sign beyond says 25 MPH. Do you accelerate half as fast? No, you just let up on the gas pedal that much sooner. GMR says you accelerate half as fast.

Funding is a problem because we haven't defined the policy and a clear course of action.

Many of the federal agencies are afraid the cost of implementing GMR in their current structure will be really high. That's not necessarily the case if they are currently set up with a mobilization planning element in their organization. Nothing more should be required. Most of the stuff they need to do GMR planning already exists within their department. It just has to be rearranged and some costed option packages developed which either they can choose or will be established for them by the PCC.

I'm looking to OSD to define the triggering events and implementation mechanisms.

Policymaker support is a problem only in the sense that planners have not articulated well what support they need. Triggering events is a stumbling block, but more apparent than real. They really don't have to be defined to develop.

QUESTION P:

Which of the following would be the greatest constraint to the successful activation of a GMR system? Please rank order from the most constraining (1) to the least constraining (9,10, or 11).

- _____ Command Structure: no single person having overall authority and responsibility
- _____ Correctly interpreting warning signals/types of crisis that require immediate action
- _____ Industries lack of planning
- _____ Lack of interagency coordination
- _____ Lack of support from the President
- _____ Lack of support from the public
- _____ Lack of support from industry
- _____ Legislation
- _____ Reliability of DOD stated requirements
- _____ Other (please specify) _____
- _____ Other _____

RESULTS OF QUESTION P: See Table 10.

ANALYSIS OF QUESTION P: Table 10 shows a summary of the varied answers. Respondents did not have to rank every factor, and they were allowed to give several factors the same ranking if they so desired. The rankings are intended to show the relative importance of the factors; they are not ordinal and are not intended to reflect values.

As with the previous question, the respondents did not all agree on which factor would be the most constraining. Three of the factors were not mentioned as being the number 1 problem: industries lack of planning, interagency coordination, and support from the President. The means (i.e. average) shown in the table give a general idea of the relative importance that a factor was given by the group of experts as a whole. Correctly interpreting warning signals/types of crisis that require immediate action was clearly listed as the number 1 factor by respondents. A close corollary to that was identified in the comments section. The supplemental comments provide unanimous

support to the major problem being initiating action based on ambiguous warning.

Factors proposed under the Other category include:

- Getting people to take action (ranked 1 by three respondents).
- Lack of support from senior policymakers (ranked 1).
- Lack of Congressional support/funding (ranked 3).
- The execution process (ranked 3).
- Lack of planning data (ranked 5).

TABLE 10.

RANK ORDER RESPONSES FOR QUESTION 4 P.

	# OF TIMES RANKED AS											
	MEAN	1	2	3	4	5	6	7	8	9	10	11
Command Structure	4.30	2	2	1		2				1		1
Interpreting warning	1.76	10	2	3								
Industries lack of planning	6.00		1		1			1	1	1		
Interagency coordination	4.44		2	2	2		1		2			
Presidential support	3.57		2	2	2			1				
Public support	4.66	1			2	2				1		
Industry support	5.57	1			1	1	2		1	1		
Legislation	5.33	1		1		1	1	1			1	
DOD requirements	3.28	1	3	1			1	1				
Other	N/A	4		2		1						

COMMENTS:

Presidential support will be a function of credibility/severity of the warning.

Once you take the first step, you're sending a signal there are international problems. There will be people who argue lets not send that signal because it may accelerate the tension. If that is the case, then the concept of GMR is lost.

Calling up of the reserves is a similar problem to taking mobilization actions. These are concrete steps you don't want to make unless you absolutely have to. The problem is going to be getting the policymakers to act on ambiguous warning. Once the decision is made, then I don't think any of the other items you list will be a problem. But you must get policymakers to say now is the time. GMR helps by making the first step a baby step instead of a giant step. But any step could be a problem.

The trigger for GMR is not an event, it is a person. In OSD that person is the Undersecretary of Defense for Policy. By directive, he is the one who decides whether or not to convene the crisis coordination system. The astuteness of that individual is very important to the successful implementation of GMR. Every organization should have a person who decides when to create/disband a task force. The relationship between that person and the PCC is not well defined. As reflected in a recent DOE GMR prototype implementation plan, draft response packages will be submitted to PCC. So words Linking response packages to the PCC are being written.

It's very hard to overcome the inertia in this building. Action should originate from the Undersecretary of Defense for Policy. He should go to the Secretary of Defense and say here's what's happening, here's how it might escalate, and here's some prudent things I think we should do now.

One of the key problems that can arise within GMR is correctly interpreting the warning signals and taking the appropriate action. If you overreact or are unaware of how your adversary will read the signal, you could easily escalate the problem.

Convincing anyone that we need to take action based on ambiguous warning is going to be the hardest thing to do.

QUESTION Q:

What GMR related tasks has your organization completed?

ANALYSIS OF QUESTION Q: One of the best measures of support is action. The comments below indicate that some action is being taken. The prime movers are FEMA and the OSD. The services are doing some things that have GMR implications, but little specifically implementing GMR. There are several important documents in draft form. When those documents are finalized both the services and civil agencies may have a stronger understanding of what to do. If GMR is to be successful it needs specific reference vs indirect reference in important documents. It also needs more widespread exposure, both as a concept and as a plan of action. Classes like those mentioned below at ICAF help do that.

RESPONDENT'S COMMENTS:

We've included GMR in draft Industrial Preparedness Program directives.

1988, 1989 Production Base Analysis Document on some of our basic weapon systems, four or five bottlenecks down. Each bottleneck is assessed in terms of steps necessary to correct it. We've defined GMR in AFR 78-10.

Letter contracts and funding profiles. We've also identified critical items and when we need to order them based on their lead times.

Defense Mobilization Order as a final rule was published in the Federal Register in January of 1990. We've also done a Federal Preparedness Guidance document on GMR. Prototype GMR plan for DOE.

Many studies/reports for OSD/DOD on GMR since its inception as INDCON.

Taught classes on GMR to ICAF students (still ongoing).

I am not aware of any as of yet.

We've gotten GMR words in the President's National Security Strategy, the Defense Planning Guidance, and the annual Posture Statement.

Issued guidance, regulations, and legislative proposals. We've also funded Energy Department prototype option packages.

Nothing, really, to be honest with you.

Staffing of draft documents.

Costed option packages for exercises. But we are not going to develop additional packages unless directly tasked in an exercise.

QUESTION R:

What GMR related tasks is your organization now working on?

ANALYSIS OF QUESTION R: The tasks currently being worked on show a large amount of focused GMR activity is occurring. The work now in progress addresses important needs including: a strong policy statement, defining the control structure of GMR, intelligence dissemination, written directives, prototype plans, a common database, funding sources, and preservation of the industrial base.

RESPONDENT'S COMMENTS:

We are developing the USAF War and Mobilization Plan Volume VI (WMP-VI). Once published, we'll link our planning to the deliberate planning process by having the critical item list drive analysis of industry. The Air Force industrial mobilization process includes industrial response levels which parallel GMR spirit and intent.

Implementation and PCC activity is our current focus.

We've begun the capacity analysis planning. We have a draft WMP-VI. We're actively involved in the development of DOD 4005.1 and 4005.3M.

Getting GMR included into the IPP manual, but clearly it will not address all GMR issues.

We're working on:

- Draft National Security Directive involving GMR will be going up for presidential signature.
- A prototype GMR plan based on a simulated war in the Middle East.
- A National Emergencies Act (omni-bus mobilization legislation) study.
- Draft DOD Directive and draft DOD Instructions.

JSCP-Incorporating GMR into our deliberate planning process.

Legislation that would give the OSD authority to reprogram funds without congressional approval once we are in stage 2 of GMR.

OSHA relaxation policy.

Orienting the database toward GMR type information requests. This includes working with the Chart Group on the

Industrial Base which is looking at data elements useful to DLA, the services, Commerce, and the Canadians.

We're doing a project for Congress looking at maintaining the industrial base as we downsize.

We're working on a DOE GMR prototype implementation plan. We're also developing Industrial Base Development Procedures that will be included in DOD Directive 4005.1 and 4005.3M.

Further guidance, and funding of another agency prototype. We're also working on articulation of scenarios with DOD, upon which to base GMR planning. And lastly, getting the intelligence community's periodic reports into the hands of the mobilization planners.

QUESTION S:

What development and implementation time frames have been established?

ANALYSIS OF QUESTION S: GMR is still very much in a developmental stage. The projects discussed in the previous question will go a long way toward maturing GMR. It is however an iterative approach. Since GMR is a mindset as well as a process, it is impossible to clearly give an implementation date. The dates below are milestones toward implementation.

COMMENTS:

Fall 1990 for the 4005.1 manual update.

The Chart Group will identify the common data elements by the end of 1990.

We'd like to see it pretty firmly establish by the end of the first Bush Administration.

Interagency tabletop exercises by September.

4005.1 is targeted for July 1990 and 4005.3M is targeted for December 1990.

This year, probably in July, implementation of GMR will be initiated from FEMA's point of view. The Guidance document and the prototype GMR plan make that possible.

We will publish the WMP-VI in the Summer of 1990.

QUESTION T:

From your perspective, what are the strengths of GMR?

ANALYSIS OF QUESTION T: Common themes run through the respondents' replies. They stated that GMR is a realistic, systematic approach to mobilization. GMR provides a mechanism for coordinated government-wide mobilization activity. Its graduated format allows early, manageable steps to be taken in response to warning. It's affordable and helps eliminate questionable spending. Its upfront planning allows for rapid crisis response. It's also flexible; it can be used to deter while simultaneously building a better posture.

RESPONDENT'S COMMENTS:

It's realistic in thinking about early action and it promotes flexibility.

It's a prudent approach to expanding U.S. industrial capability because it:

- 1) focuses on pacing constraints
- 2) rationalizes resource usage
- 3) requires upfront planning, which save time in a crisis.

GMR provides a sound deterrence - if not, then at least preparedness (capability) has been increased.

It's graduated, it's not an all-or-nothing situation. It allows you to send signals without being too provocative. You can also take steps that are reversible.

The ability to rapidly develop options for generating additional military power in response to early warning.

It's a defined planning process that lays out a roadmap for mobilizing. It is an affordable process, which is very important. If we don't deter through GMR, we'll be better postured.

It's something to do.

It's good in that it recognizes mobilization as a continuum of progressively increased activity. It provides a roadmap in that it defines options at different stages. It recognizes warning. It provides a standard structure for mobilization planning. It provides a mechanism to coordinate overall government wide mobilization activity.

There is a mechanism or discipline to think logically about mobilization actions. It gives you a chance to sit down ahead of time, before you're faced with a crisis and think through the process of execution. The eventuality that you might take early action is a plus, but the real strength lies in developing the policies and system so that when you decide you have to react you can do so quickly and without hesitation.

Its primary strength is that it responds to real world crises and it eliminates necessity of questionable spending. With the concept of GMR in place you've eliminated the idea of marching to war step by step, the demand for huge arsenals that may never be used, and there is enough left budget-wise to keep technology current and production capability there so that if you did want to increase production rapidly you have the ability to do it. But you don't have to make the up front investment.

The recognition that it does take time to mobilize any economy and that there needs to be a phased approach rather than one declaration of the need to mobilize.

Its time has come, especially with the changes in force structure. My point is we have a more plausible basis of warning and I think it would fit into the national policy shifts.

It is much more realistic in terms of the political situation and economic situation in the world. Industry is also much more willing to discuss something like GMR than the outrageous requirements from the past. Hughes, for instance, seemed much more interested in talking about GMR than the previous system.

Two main things:

- GMR responds to new warning time estimates and relaxed tensions, without losing focus on the need to regenerate if situation worsens.
- GMR forces agencies to think about "pump priming" actions that get overlooked in routine planning.

These are more manageable decisions. Whether they're so much more manageable and we'll get them made sooner, I don't know. At least it makes it easier for the policymaker, rather than committing to the whole thing, to take off smaller chunks. That is, if it is effectively implemented.

QUESTION U:

From your perspective, what are the weaknesses of GMR?

ANALYSIS OF QUESTION U: A variety of weakness with GMR or our ability to implement GMR were identified by the respondents. The primary weakness will probably be getting the appropriate leaders to act early on ambiguous warning; it's a matter of political will. An elaborate GMR system is not of much use if it isn't triggered. History is full of examples of man's tendency not to act under ambiguous conditions. It is also full of examples of inaction in the face of clear danger. Other weaknesses include: a lack of written guidance, intelligence interpretation, and planner's inability to impact service spending prerogatives.

Of the 16 experts interviewed, only one thought GMR is not warranted. That individual felt GMR is fundamentally flawed in that you shouldn't act in measured responses. He felt that when you identify a problem, you do everything necessary to correct the deficiency as soon as possible. His contention was that GMR doesn't try to correct problems as quickly as is possible.

COMMENTS:

Political will, the ability to acquire and/or act on ambiguous warning, and finally national commitment.

The basic weakness is that people may think it will do more than it is really planned to do. GMR tends to be oversold as a cure for all of industry's ills.

If it's not implemented when it should be.

You can come up with an elaborate paper capability, but fundamentally it rests on the political leadership saying lets do it. Roosevelt prior to WW II was confronted with resistance to early action. The same problem is seen in today's exercises. Other weaknesses include a lack of support from senior policy makers and the general lack of recognition that the industrial base is a component of our national strategy.

They need to firm up the verbal discussion of GMR in such a way that people can respond to it.

The weaknesses are not of the concept, but involve the implementation of the concept. That is getting on line in the first place. The second consideration is that it may be wasted money, but it's an insurance policy.

Trying to get support for the various costed options that may never happen.

The triggering events, and getting someone to say something outside of normal business has occurred, that we should develop options, evaluate those options, and then make a decision on whether or not to respond early. Reality says, that we are going to begin strong mobilization actions much before we are really into some kind of crisis maybe really optimistic. But that's not the real reason we're trying to do this anyway. We're trying to make course corrections to the smaller things.

We don't currently have a good intelligence network set up to address GMR. Intelligence is good, but putting it together in a format that is meaningful for all the departments and agencies is going to be a tough nut to crack. We are in the process of getting a cooperative effort between the CIA and DIA to work together with FEMA and other interested parties for looking at intelligence and trying to interpret that so that misinterpretation doesn't happen.

In order to get the fullest out of GMR, you have to react early to ambiguous warning signals. Decision makers must be willing to make the decisions that have to be made at the point which they have to be made based on that ambiguous warning.

Political will.

Our ability to respond to early warning. There needs to be a recognition that there are not clearly defined stages, so don't try to force it. For different items you might be at different stages of the continuum. You've got to keep the flexibility in GMR, everything is not stuck in the same stage. It needs to be recognized that this is a conceptual framework which we can adopt as general guidance, but we need to retain flexibility. There needs to be structure, but there also needs to be flexibility. You're going to have to come up with money, a lot of it, and at an early stage to be effective in a crisis.

It is fundamentally flawed.

It's too big. We need to take one step at a time. Warning time assumptions and the execution process are additional problems.

It is very difficult to establish both a unified interpretation of ambiguous warning and a unified course of action. A major problem is that there is no way to counter the services spending prerogatives.

QUESTION V:

Are there any questions related to GMR and mobilization you would like to see answered or addressed by other mobilization planners and policy makers?

ANALYSIS OF QUESTION V: GMR is an ambitious concept that certainly is not out of the developmental stage. The respondents identified several key factors that need to be addressed including:

- A clear national strategy and mobilization policy statement
- Strong top level commitment, support, and direction
- Additional guidance and implementation details
- Thorough reevaluation of the current plans and databases

COMMENTS:

No, if anything, they probably need to pull back a little. When GMR first started it dealt with industry. Now GMR is everything, the whole mobilization process. We're talking people, industry, logistics, transportation, infrastructure, the whole nine yards.

How do we determine the break point between the stages? At what point should the Secretary of Defense implement the authorities that he'll be given.

I would like for the political foreign policy element of the government (i.e. policy areas of State, Defense, and NSC) to identify what they think the biggest weakness of GMR is so they can start thinking of what their decisions might be.

I would like to see some guidance from the PCC to the federal agencies on what they should be doing in developing the GMR option packages.

The following needs must be addressed:

- A clear policy
- Top level support and direction
- Commitment by OSD policy leaders and decisionmakers.

When can we stop this [GMR] nonsense and get onto something serious.

Until GMR has achieved a few years on it, it can almost still be considered developmental. We're very flexible with GMR and it's able to adapt to pretty much anything. In the

next 1-2 years of implementation is where the questions will arise.

Strong vocal support is needed from all Federal Agencies and key industry officials.

Almost all the plans that exist need to be reviewed for application of GMR. Almost everybody needs to look at the way they collect data and their organization of the data bases. That's one of the reasons we need to prethink. We need to do the exercises from a GMR viewpoint, so that means we need to revise the way we do our exercise plan. We need to think about laying down a foundation that allows us to conduct GMR.

The fundamentals in terms of national strategy and national mobilization. Those things are going to have to be resolved.

I'm holding back any judgements until the directives and instructions are rewritten.

QUESTION W:

Can you think of anything else you want to add to our discussion of GMR and mobilization?

ANALYSIS: Not applicable for this question.

COMMENTS:

Wish the concept was pushed in the late 70's so that funding from the early 80's could have been applied and allowed GMR to become institutionalized.

We don't really know how to plan for mobilization. The services do know how to plan with their current contractors fairly well. Sector analysis is not as well done, although DOD does get involved. But the macro and national level planning is very far removed from the services; we don't know how to do that. Another important point is that DOD has little influence on industry; our influence is on the major primes. We can't influence the problems in the subtier base through the DOD budget.

The economic philosophy that this country has, is to not include in economic policy decisions the growing foreign dependencies. We're not concerned with foreign investment taking our technology, creating a competitor, and even moving production offshore. We are addressing the trade balance from a policy statement rather a security standpoint.

We'll know more about GMR as we get further down the road. We know what a lot of the hurdles will be, and we feel very comfortable in being able to overcome those.

Threats to national security today are more involved with economic security. Working through GMR allows us to build on our peacetime base so that we have a responsive base.

I don't think that we can adequately plan for mobilization during peacetime. When an emergency actually happens, you'll do things you never anticipated doing. This may turn out to be better than we thought. As an example, take operational planning. Operational people make plans but when the war actually starts those plans often go out the window and you do something different from what you thought you were going to do.

Total Quality Management (TQM) is an example of how GMR must be implemented; it has to be accepted and it has to be actively supported by top management, and it has to permeate

the thought processes and operations of everybody in the organization. And we certainly haven't achieved that yet. In fact, even though it's embedded in policy, I have not heard the current top management (i.e. Secretary of Defense,

Assistant Secretary of Defense, or the Under Secretary of Defense for Acquisition) endorse the concept.

VI. Conclusions and Recommendations

Introduction

The United States does not have a comprehensive, fully integrated mobilization system. GMR has been proposed as a first step toward the development of such a system, and this research has attempted to verify whether GMR is up to the task.

Answers to the Investigative Questions

The investigative questions used to guide this research were introduced in Chapter 1. This section provides the author's answers to those questions. The answers are based on a synthesis of the information obtained through the literature review and interview processes.

Question One. How is Graduated Mobilization Response different from the previous mobilization policy?

Answer One. The definition and purpose statement from Chapter 4 brought out the character, goals, and scope of GMR. GMR uses existing plans, policies, and procedures. GMR is a coordinating system; as such, it attempts to integrate the various plans, policies, and procedures into a more logical and systematic approach to contingencies. That logical and systematic approach includes early, but measured, action based on ambiguous warning signs. By

emphasizing early action, negative impacts can be averted/mitigated.

From a military perspective, GMR is designed to 1) improve deterrence of war, and 2) ensure a strong foundation of preparation exists should war become necessary. But, the scope of GMR transcends the more traditional concern of war-related surge and mobilization. The area of relevance of GMR is a wide continuum which also includes peacetime responses to technology breakthroughs and natural/manmade disasters. With such a wide continuum of potential involvement, GMR encompasses more than industrial mobilization; it is more accurately described as resource mobilization.

Whereas GMR can be viewed as a proactive system, the previous system was largely reactive. Mobilization was viewed as a drastic war-time step which would be taken once things were already out of hand (i.e. - once war became imminent or was taking place). This is not to say there was not any recognition of the need for earlier action, but in many cases the ability to react was intentionally legislatively constrained by the prerequisite of a declaration of national emergency. While federal agencies/departments (like the State Department) did react to contingencies, the previous system largely excluded mobilization from being an effective partner in quick response deterrent strategies. In addition, what mobilization preparations were initiated were done in a

unilateral fashion by an agency/department without concerted integration in the overall response plan.

Question Two. What are the strengths of the Graduated Mobilization Response concept?

Answer Two. This question was previously addressed and analyzed in Chapter 5, Topic 4, Question T. GMR is a realistic, systematic approach to mobilization. GMR provides a mechanism for coordinated government-wide mobilization activity. Its graduated format allows early, manageable steps to be taken in response to warning. It is affordable in that it requires fairly low day-to-day expenditures. Spending increases counter specific problems which helps to decrease the requirement for broad based non-specific spending. Its upfront planning allows for rapid crisis response. It is also flexible; it can be used to deter while simultaneously building a better posture.

Question Three. What are the weaknesses of the Graduated Mobilization Response Concept?

Answer Three. This question was previously addressed and analyzed in Chapter 5, Topic 4, Question U. There are a variety of weakness with GMR or our ability to implement GMR. The primary weakness will probably be getting the appropriate leaders to act early on ambiguous warning; it's a matter of political will. An elaborate GMR system is not of much use if it isn't triggered. History is full of

examples of man's tendency not to act under ambiguous conditions. It is also full of examples of inaction in the face of clear danger. It is possible GMR will be used as an excuse to unreasonably decrease the funding of preparedness efforts. A combination of underfunding preparedness and failure to take early action could be devastating to U.S. response capability. Other weaknesses include: a lack of written guidance, intelligence interpretation, and planner's inability to impact service spending prerogatives.

Question Four. Is GMR a valid way to improve the mobilization posture/capabilities of the United States?

Answer Four. GMR is a valid way to improve the mobilization posture/capabilities of the United States. While it is important to stress that GMR is not a "be all and end all," it is an important first step toward improving U.S. mobilization capability. Chapter 3 identified five factors which are commonly seen as limiting U.S. mobilization potential. GMR directly improves one of those factors and indirectly would improve the remaining four factors.

The factor most directly impacted is Strategic Planning. Recent National Security Strategy Planning documents include statements which support the development of graduated responses as a means of deterrence. GMR is a combination mechanism, process, and mindset which lends credence to such policy statements. Once fully developed, GMR will include

department/agency level watch teams and an intra-agency action body to act on ambiguous warning. GMR will also include clear procedures for pre-emergency planning and coordination. And, finally, GMR will include a resource vs capability assessment mentality. The GMR mechanism, process, and mindset can combine to form a major portion of the U.S. Deterrent and Reaction Strategy.

The other four factors include leadtime, raw materials, foreign dependency, and the industrial structure. These factors would not be directly improved by GMR, but their negative effects would be mitigated through early GMR implementation. Option packages would be developed to identify cost-effective actions on long lead time items for critical systems. The same would hold true for critical raw materials. Both long lead time items and raw materials can and should be purchased at the very onset of trouble. Mitigating weaknesses due to foreign dependence and a weak U.S. industrial base would take longer, but these problem areas would still benefit from early GMR action.

Early action is the key to GMR. GMR realistically emphasizes the importance of, and is dependent on, early action. This early action will require an awareness of the world situation and a global consciousness which is often lacking in government circles. GMR is a valid way to improve the mobilization capability/posture of the U.S., but its success will be closely linked to that awareness.

Realistically, initial early action will often be limited by a lack of awareness, political will, and/or funding. "Early" is, however, a relative term. GMR articulates a wide range of options for a given crisis and even if only some of these options are acted upon previous to a declaration of national emergency the U.S. will be better off. And early action does not stop once a crisis begins; GMR is a continuous process. Throughout a crisis response, GMR continues to take proactive steps (i.e. - early action) to ensure potential problems are mitigated and the crisis is contained.

Question Five. What are the impediments to GMR becoming a key element of U.S. national deterrent strategy?

Answer Five. This question was addressed by two questions in the interview. Chapter 5, Topic 4, Question O addressed constraints in the development of GMR. Question P of that same topic area addressed constraints in the implementation of GMR once it has been fully developed. The responses to those questions revealed significant impediments to the development and implementation of GMR. Taking a more macro approach, there also appears to be significant impediments to the inclusion of GMR as an effective element of U.S. national deterrent strategy. Those impediments include deficiencies in the following areas:

- National mobilization policy
- Leadership

- Bureaucracy
- Written guidance
- Awareness of GMR

The national mobilization policy should be the impetus for, and roadmap to, a comprehensive integrated planning effort. Unfortunately, there is no clearly articulated national mobilization policy. The lack of policy means a truly comprehensive integrated planning effort is not possible. For GMR to become a deterrent, a clear national mobilization policy will have to identify objectives and priorities. Without a national policy, funding may not accurately reflect priorities; planning and preparedness efforts will not be optimized; and government officials and industry will assume the lack of a policy reflects the lack of importance of mobilization.

The second impediment is leadership. The mobilization system is degraded by the lack of strong central mobilization/emergency authority. FEMA is attempting to fill this role without the benefit of authority to uniformly implement activity throughout the government. FEMA lacks the power to enforce decisions and priorities. Unless FEMA is given more power, turf-conscious government departments/agencies, including the military services, will continue to act on their own agendas.

The third impediment is bureaucracy. By their very nature, bureaucracies resist change. Even when the leaders of the bureaucracy support the change, rank and file

employees inadvertently or intentionally slow the rate of change. This is especially true for controversial changes. In the case of GMR, the pre-crisis preparation of costed option packages has proven to be a major stumbling block to the development of GMR despite the general support for the concept at the policymaker level. Although the problem is apparently resolved, the change in administrations in 1988 meant key supporters of the concept were replaced by new political appointees, which has further delayed the adoption of GMR.

The fourth impediment is the lack of written guidance. Support for a graduated system of mobilization responses has been in upper level government documents like the National Security Strategy of the United States for several years but only in the most general terms. Those high level policy statements have not been supported by programs. Nor were they based on a national mobilization doctrine/policy. Implementation directives and plans have been almost nonexistent. Without details promulgated from the upper echelons, the federal agencies/departments including the military services have been taking a "let's wait and see" attitude. Both FEMA and the OSD are about to release documents which will clarify what GMR entails. Although those documents will undoubtedly require further refinement, they are an important step toward the institutionalization of GMR.

The fifth impediment is the general lack of awareness of GMR. The cause is a combination of a lack of written guidance, limited publicity, and limited emphasis. The lack of written guidance is about to be corrected as mentioned above but there has been only limited publicity given to GMR in journals and publications. It was very surprising to learn half of the experts were not familiar with GMR problems identified in past JCS and Navy sponsored GLOBEX exercises. GMR definitely needs more publicity, both inside and outside government channels. GMR lost some of its momentum because of the controversy over costed option packages, changes in the Office of the Secretary of Defense, and the change in administrations. GMR has recently regained momentum but educating the new policymakers on GMR will be a continuing challenge.

Conclusions

It is apparent from this research that a Graduated Mobilization Response system is a logical, cost-effective means of integrating and focusing U.S. war and emergency mobilization action. It is also apparent that GMR will face challenges living up to its potential. Not the least of these challenges will be getting leaders to make decisions early in a potential crisis, especially based on ambiguous warning. GMR can, however, be quite successful. A dedicated core of planners and preparedness experts will have to do the staff work on a daily basis and "sell" the

leaders on action whenever warranted. That staff work will have to look beyond the immediate resource requirements of a particular crisis; the planning will have to articulate the longer term considerations which are often overlooked in the midst of a crisis. The better the staff work, the easier it will be for the our leaders to make decisions. Ultimately, it will come down to the elected officials making the decisions. By breaking the decisions into smaller units, GMR will hopefully make those decisions easier and in a more timely fashion.

GMR is a mechanism for action, and it is a philosophy of action which can serve the U.S. quite well. But it will require strong support to be successful. In large part, its success will be commensurate with the priority mobilization is given in the national deterrent/response strategy.

Recommendations for Further Research

This research effort looked at the validity of the GMR concept. During the course of this research, additional areas requiring research became apparent. The following areas should be considered:

- - Identify current and preferred command/control structures (hierarchies, coordinating organizations, reporting relationships, etc.) for mobilization/emergency responses.
- - Identify mobilization legislation requiring updating to facilitate GMR.

- - Research the consolidation of mobilization legislation under an omni-bus statute (i.e. - a National Emergencies Act).
- - Identify ways to facilitate decisionmaking in an ambiguous warning environment where the threats and responses are largely non-quantifiable.
- - Analyze and critique the military services' efforts at implementing GMR.
- - Analyze and critique policy alternatives on foreign dependance on critical components/raw materials.

Appendix A: Acronyms and Abbreviations

ASPPO	Armed Services Production Planning Officer
CFR	Code of Federal Regulations
CIL	Critical Item List
DEFCON	Defense Condition
DMO	Defense Mobilization Order
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOL	Department of Labor
DOT	Department of Transportation
E.O.	Executive Order
FEMA	Federal Emergency Management Agency
GMR	Graduated Mobilization Response
IDA	Institute for Defense Analysis
INDCON	Industrial Condition
IPM	Industrial Preparedness Measure
IPP	Industrial Preparedness Planning
IPPP	Industrial Preparedness Planning Program
JCS	Joint Chiefs of Staff
NSC	National Security Council
NSEP	National Security Emergency Preparedness
OSD	Office of the Secretary of Defense
PCC	Policy Coordinating Committee for Emergency Planning and Mobilization Preparedness
POM	Program Objective Memorandum
TASC	The Analytic Sciences Corporation
WMP	War and Mobilization Plan

Appendix B: Key Definitions

Costed Option Package - A document which describes in detail a particular action an agency could take in the early stages of a national security emergency. The general content of a GMR costed option package includes alternative response options; the resource implications of each option; shortfalls, costs, timeframes, and political feasibility. (11:1823)

Graduated Mobilization Response (GMR) - A system for integrating mobilization actions designed to respond to ambiguous and/or specific warnings. These actions are designed to mitigate the impact of an event or crisis and reduce significantly the lead time associated with a full national emergency action implementation. (11:1822)

National Security Emergency - Any occurrence, including natural disaster, military attack, technological emergency, or other emergency, that seriously degrades or threatens the national security of the United States. Many mobilization actions are contingent upon Presidential declaration of national emergency. (11:1822)

Mobilization - The process of marshalling resources, both civil and military, to respond to and manage a national security emergency. (11:1822)

Surge - Accelerated production/maintenance/repair of selected items to meet contingencies short of a declared national security emergency. (4:10)

Appendix C: Telephone Interview

Mr. John Doe
0000 AFIT Drive
Fairborn, OH 45385

April 90

Mr. Doe,

Thank you for agreeing to participate in the telephone interview I am conducting. As I stated in our phone conversation, I am a graduate student at the Air Force Institute of Technology (AFIT) and my thesis is an analysis of Graduated Mobilization Response (GMR). Specifically, I am attempting to identify the validity and progression of the graduated approach to mobilization planning.

I will be conducting telephone interviews with people involved in all aspects of mobilization planning/execution. An advanced copy of the questions to be asked is attached. I will telephone you within two weeks to set up a convenient time for the interview.

Comments and suggestions on this research will be appreciated. The AFIT phone number is (513)255-4437, AUTOVON 785-4437, and my home number is (513)258-1291. Thank you in advance for your attention and the assistance you will provide by being interviewed.

Sincerely,

Capt Thomas A. Schneider
5979 Hickam Drive
Dayton, OH 45431
(513)258-1291

2 Atch
1. Background
2. Telephone Interview
Questions

School Address:
Air Force Institute of Technology/LSG
Attn: Capt Thomas Schneider
GLM90S
Wright Patterson AFB OH 45433
Commercial (513)255-4437
AUTOVON 785-4437

TELEPHONE INTERVIEW BACKGROUND

Interview Objectives:

- a. To solicit expert opinion about Graduated Mobilization Response. Specifically, identifying:
- Whether or not there is a need
 - Whether or not there is support
 - What actions related to GMR have been initiated
 - What actions related to GMR still need to be taken

General Comments:

a. The topics in the questions are not complete or exhaustive in nature. The aim of the questions is to provoke thought and urge your comments. At this stage, there are no correct or incorrect answers. Your honest opinions are vital to the success of the research.

b. If you request it, you are guaranteed complete anonymity. In that case, your name will not be used with regard to your participation or your comments. I understand the political nature of some of the questions. I am very interested in both your organization's "party line" and your personal opinions (some of which you may desire to keep off the record). Even if you do not request anonymity, If I do intend to use any direct attributable quotes I will ensure I have your permission before I submit the thesis to the school.

c. If you give permission, the telephone interview will be tape recorded. I will be using a hard copy of the interview questions (as attached) to record your answers but a recording will:

- speed up the interview process, especially when recording your comments
- ensure your thoughts are accurately recorded

The tapes will not be used for any other purpose than for the stated work in my thesis. The tapes will be erased after my thesis work is completed (September 1990).

Atch 1

TOPIC 1: HISTORICAL RELEVANCE

a. Experience from past U.S. mobilization efforts remains relevant for national and organizational planning.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

b. Experience from past U.S. mobilization efforts is adequately incorporated in the present national and organizational mobilization plans.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

c. Which of the past industrial mobilization efforts do you think provides the most significance for present and future industrial preparedness planning? Please rank order your response from most significant (1) to least significant (4).

_____ World War I
_____ World War II
_____ Korean War
_____ Vietnam War

_____ I do not think experience from past U.S. mobilizations provides significant help in preparation for future conflicts.

COMMENTS: _____

d. Industrial surge actions (for example: the replacement of equipment given to the South Vietnamese, and the replacement of items provided to Israel in 1973) are more likely to be required than industrial mobilization actions.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

e. Industrial surge actions (for example: the replacement of equipment given to the South Vietnamese, and the replacement of items provided to Israel in 1973) are more important for present industrial planning than industrial mobilization actions.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

TOPIC 2: STRENGTHS AND WEAKNESSES OF THE CURRENT INDUSTRIAL BASE

a. The current industrial base has the capability to provide adequate support if mobilized.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

b. The current industrial base has the capability to provide adequate support if surged.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

c. Which of the following would most limit mobilization of the industrial base. Please rank order the following items from the most constraining (1) to the least constraining (8, 9, or 10).

- _____ Appropriations
- _____ Dependence on foreign sources
- _____ Inadequate planning
- _____ Infrastructure (transportation, electricity, water)
(communications, etc.)
- _____ Lack of basic industry
- _____ Lack of trained workers
- _____ Lack of tooling
- _____ Raw material availability
- _____ Other (please specify) _____
- _____ Other _____

TOPIC 3: MOBILIZATION PLANNING

a. DoD operational guidance and plans focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

b. The present mobilization plans focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

c. Mobilization plans should focus on a "short war" as opposed to a "long war" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

d. Current mobilization plans attempt to counter the full spectrum of scenarios including the "worst case" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

e. Mobilization plans should attempt to counter the full spectrum of scenarios including the "worst case" scenario.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

f. The U.S. Government currently has in effect adequate industrial mobilization plans.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

g. The U.S. Government has in being an adequate control structure for industrial mobilization.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

h. The U.S. Government adequately promotes private firm involvement in industrial preparedness planning.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

i. The pending reductions in defense appropriations will significantly increase the strategic importance of mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

j. The pending reductions in force structure will significantly increase the strategic importance of mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

k. Will your department/branch of service experience a significant increase or decrease in mobilization planning in the 1990s? Please pick one.

INCREASE

DECREASE

NO CHANGE

NOT APPLICABLE

COMMENTS: _____

l. Will your department/branch of service experience a significant increase or decrease in mobilization preparedness in the 1990s? Please pick one.

INCREASE

DECREASE

NO CHANGE

NOT APPLICABLE

COMMENTS: _____

m. Funding for mobilization planning is currently adequate.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

n. Funding for mobilization planning will need to significantly increase during the 1990s.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

o. Funding for mobilization preparedness is currently adequate.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

p. Funding for mobilization preparedness will need to significantly increase during the 1990s.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

TOPIC 4: GRADUATED MOBILIZATION RESPONSE (GMR)

a. The concept of Graduated Mobilization Response is a valid way to improve U.S. mobilization preparedness.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

b. GMR is being institutionalized via changes to:
National security policy and strategy documents; and/or
mobilization planning and program documents; and/or
legislation.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

c. GMR will not require significant changes to the current mobilization statutes.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

d. Key GMR concepts (authorities, organizational responsibilities, etc.) are clearly spelled out in written directives, policy letters, or memorandums.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

e. Key GMR concepts (authorities, organizational responsibilities, etc.) are well understood by your organization's mobilization planners.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

f. Key GMR concepts (authorities, organizational responsibilities, etc.) are well understood by your organization's mobilization policymakers.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

g. Adoption of GMR is strongly supported by your department/branch of service.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

h. GMR will significantly affect the way your department/branch of service plans for mobilization?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

i. Within your organization, adequate funding will be provided for the development and testing of GMR.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

j. You are familiar with the GMR related problems that were identified in after action reports on PROUD SCOUT 88?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

k. You are familiar with the GMR related problems that were identified in after action reports on and GLOBEX 89?

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

l. GMR related problems identified in PROUD SCOUT 88 have been corrected.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

m. GMR related problems identified in GLOBEX 89 have been corrected.

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

n. Option packages must contain a cost benefit analysis that includes all of the following:

- - Costs of individual actions
- - Response lead times and
- - Feasibility of individual actions and the overall system

1	2	3	4	5
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

COMMENTS: _____

p. Which of the following would be the greatest constraint to the successful activation of a GMR system? Please rank order from the most constraining (1) to the least constraining (9,10, or 11).

- _____ Command Structure: no single person having overall authority and responsibility
- _____ Correctly interpreting warning signals/types of crisis that require immediate action
- _____ Industries lack of planning
- _____ Lack of interagency coordination
- _____ Lack of support from the president
- _____ Lack of support from the public
- _____ Lack of support from industry
- _____ Legislation
- _____ Reliability of DOD stated requirements
- _____ Other (please specify) _____
- _____ Other _____

COMMENTS: _____

q. What GMR related tasks has your organization completed?

COMMENTS: _____

r. What GMR related tasks is your organization now working on?

COMMENTS: _____

s. What development and implementation timeframes have been established?

COMMENTS: _____

COMMENTS:

COMMENTS:

COMMENTS:

Appendix D: List of Respondents

Name: Mr. Bob Fabrie
Title: Chief, Production Policy Branch
Org.: Defense Logistics Agency
Address: HQ Defense Logistics Agency
DLA/PR
Cameron Station
Alexandria, VA. 22304-6100

Name: Mr. Martin Garshak
Title: Policy and Plans Division GMR Project Officer
Org.: Federal Emergency Management Agency
Address: FEMA Room 629
500 C Street SW
Washington D.C. 20472

Name: Lt Col Robert Hayes
Title: J-4 Industrial Base Planner
Org.: Joint Chiefs of Staff
Address: Joint Chiefs of Staff J4
Washington D.C. 20318-4000

Name: Dr. Martin Libicki
Title: Senior Fellow
Org.: Strategic Capability Assessment Center,
National Defense University
Address: SCAC/INSS National Defense University
Fort Lesley J. McNair
Washington D.C. 20319-6000

Name: Mr. Nick Linkowicz
Title: Mobilization Planner, Logistics Plans and
Operations Branch
Org.: U.S. Marine Corps
Address: Commandant, U.S. Marine Corp (LPO)
HQ Marine Corp
Washington D.C. 20380-0001

Name: Mr. Jim Miskel
Title: Deputy Associate Director Mobilization Office
Org.: Federal Emergency Management Agency
Address: FEMA Room 622
500 C Street SW
Washington D.C. 20472

Name: Mr. Joe Muckerman
Title: Director of Emergency Planning
Org: Office of the Under Secretary of Defense for
Security Policy
Address: DUSD (SP) Emergency Planning
Pentagon, Room 1D462
Washington D.C. 20301-2200

Name: Dr. Jack Nunn
Title: Senior Analyst
Org.: Office of Technology Assessment
Address: U.S. Congress Office of Technology Assessment
ISC Program
Washington D.C. 20510-8025

Name: Capt. Don Pilling
Title: Director, Defense Policy
Org.: National Security Council
Address: National Security Council
White House
Washington D.C. 20506

Name: Mr. Ed Purcell
Title: Manager of the U.S. Navy Industrial Mobilization
Program
Org.: U.S. Navy
Address: OPNAV, OP-402 (F1)
Pentagon, Room 4C535
Washington D.C. 20350-2000

Name: Mr. John Richards
Title: Deputy Assistant Secretary, Industrial Resources
Administration
Org.: U.S. Department of Commerce
Address: U.S. Dept. of Commerce Room 3878
Washington D.C. 20230

Name: Mr. John Shelley
Title: Chief of Industrial Base Policy for the Secretary
of the Army Research Development and Acquisition
Org.: U.S. Army
Address: HQ Dept. of the Army
Attn: SARD-RP
Washington D.C. 20310-0103

Name: Mr. John Starns
Title: Manager, Industrial Base Analysis Section
Org.: The Analytic Sciences Corporation (TASC)
Address: The Analytic Sciences Corp.
1101 Wilson Blvd.
Suite 1500
Arlington, VA. 22209

Name: Lt Col Stock
Title: OPR, U.S. Air Force War and Mobilization Plan,
Volume VI
Org.: U.S. Air Force
Address: HQ USAF/XOOTX
Pentagon, Washington D.C. 20330-5057

Name: Mr. Rod Vawter
Title: Industrial Preparedness Planning and Policy
Specialist
Org.: Office of Industrial Base Assessment
Address: Office of Industrial Base Assessment
Suite 1406
5203 Leesburg Pike
Falls Church, VA. 22041-3466

Name: Lt Col George Williams
Title: U.S. Air Force Industrial Base Program Manager
Org.: U.S. Air Force
Address: SAF/AQCM
Washington D.C. 20330-1000

Bibliography

1. Air Force Association and The U.S. Naval Institute Military Database. Lifeline in Danger: An Assessment of the United States Industrial Base. Arlington VA: Aerospace Education Foundation, September 1988.
2. Armed Forces Staff College. The Joint Staff Officer's Guide 1988. AFSC Pub 1. Washington DC: Government Printing Office, 1 July 1988.
3. Auster, Bruce B. "A Healthy Military Industrial Complex," U.S. News & World Report: 42-48 (12 February 1990).
4. Bell, James P. Industrial Base Actions in a Period of Rising Tensions. Institute for Defense Analysis Paper P-1640. Alexandria VA: August 1982 (AD-A122914).
5. Berens, Robert J. "U.S. Military Procurement: A Perspective, Part 2," National Defense, 74: 31-32 (March 1989).
6. Berry, F. Clifton. "The Lifeline is Still in Danger," Air Force Magazine, 72: 108-110 (November 1989).
7. Blackwell, James A., Jr. "Deterrence in Decay: Erosion of the U.S. Industrial Base," National Defense, 74: 38-40 (October 1989).
8. Bowman, Mary Beth. "The Reinvigoration of the Defense Industrial Base," National Defense, 73: 41-43 (May/June 1989).
9. Clem, Harold J. Mobilization Preparedness. Washington DC: National Defense University Press, 1983.
10. Department of Defense. A Guide for Industrial Mobilization. Falls Church VA: Office of Industrial Base Assessment, March 1989 (AD-A211385).
11. Federal Register. Rules and Regulations. Graduated Mobilization Response. 55 FR 1820-1823. Washington DC: Office of the Federal Register, 19 January 1990.
12. Fowler, Donald R. and Rita A. Friga. "Leadtime Zero Revisited," National Defense, 75: 27-30 (April 1989).
13. Gansler, Jacques S. Affording Defense. Cambridge MA: MIT Press, 1989.
14. ----. The Defense Industry. Cambridge MA: MIT Press, 1980.

15. General Accounting Office. National Defense Stockpile: National Security Council Study Inadequate to Support Stockpile Goals. GAO/NSIAD-87-146. Washington DC: 4 May 1987.
16. Grosshans, Werner. "Ammunition - Can the Industrial Base Respond?" Army Logistician, 15: 14-18 (September-October 1983).
17. Harvey, David. "Productivity Crisis - Is Help at Hand?" Defense Sciences: 40-42 (March 1990).
18. Hoffman, Marshall. "Is the U.S. Ready for War?" National Defense, 72: 72-74 (November 1987).
19. Industrial College of the Armed Forces. Draft National Security Emergency Preparedness Mobilization Policy Review. Washington DC: 1 February 1990.
20. Marr, Roy T. "Industrial Mobilization as an Element of Logistics," Air Force Journal of Logistics, 7: 26-28 (Summer 1988).
21. Merritt, Hardy L. and Luther F. Carter. Mobilization and the National Defense. Washington DC: National Defense University Press, 1985.
22. Owens, Mackubin T. "A Defense Industrial Strategy," Current, 321: 28-33 (March/April 1990).
23. Peppers, Jerome G., Jr. Personal Correspondence. Air Force Institute of Technology, Dayton OH, April 1990.
24. Peterson, Blair A. "The Defense Industry: An Illusion of a Free Market," National Contract Management Journal, 20: 105-112 (Winter 1987).
25. Prather, Lt Col Thomas L. Industrial Mobilization -- The Ability to Respond. Student Essay, U.S. Army War College, Carlisle Barracks PA, May 1982 (AD-A116200).
26. Simonson, G. R. "Measurement of Defense Profit," National Contract Management Journal, 22: 47-52 (Summer 1988).
27. Starns, John. Personal Correspondence on Bibliography of GMR Concepts. The Analytic Sciences Corporation, Washington DC, 5 April 1990.
28. -----. Personal Correspondence on Chronology of GMR Concept Development. The Analytic Sciences Corporation, Washington DC, 5 April 1990.

29. ----- . TASC Researcher. "Graduated Mobilization Response." Address to U.S. Army Planners. Washington DC, 4 April 1990.
30. Taibl, Paul E. Graduated Mobilization Response: A Key Element of National Deterrent Strategy. National Defense University. Washington DC: April 1988 (AD-A196069).
31. Templin, Carl R., Major, Ph.D., Class handout distributed in CMGT 523, Contracting and Acquisition Managements. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, July 1990.
32. Terino, John G. "The Problems and Future of America's Defense Industry," National Defense, 74: 30-32 (December 1989).
33. ----- . "Takeovers, Mergers, Acquisitions: A Threat to America's Defense Capability?" National Defense, 74: 44-46 (July/August 1989).
34. The Analytic Sciences Corporation. Improving Inter-governmental Mobilization Planning: Preliminary INDCON and PERSCON Systems Vol 1 INDCON/PERSCON Report. TASC TR-5263-4. Washington DC: 15 March 1987.
35. U.S. Congress, House of Representatives, Committee on Government operation, Subcommittee on Legislation and National Security. Hearings on Adequacy of Official Information on the U.S. Defense Industrial Base. Hearing, 18 July 1989. Washington DC: General Accounting Office, 1989.
36. Wallzer, Michael H. and Paul Wienir. Research Methods and Analysis. New York NY: Harper & Row, 1978.

VITA

Captain Thomas A. Schneider was born on 26 March 1961 in Ridley Park, Pennsylvania. He graduated from Archbishop Wood High School in Warminster, Pennsylvania in 1979 and attended the Pennsylvania State University, graduating with a Bachelor of Science in Management in May 1983. He completed Officer Training School in February 1985 and served his first tour of duty at Goodfellow AFB, Texas. He began as the Center Plans Officer overseeing the development of 20 base level contingency/war plans. As the primary Contingency Support Staff (CSS) Coordinator he also oversaw the implementation of those plans. In 1987 he was chosen to concurrently serve as the 3498th Headquarters Squadron Section Commander. As Section Commander he ensured equitable implementation of Air Force programs throughout the 170 person squadron. He was selected as a Masters Degree Candidate and entered the School of Systems and Logistics, Air Force Institute of Technology, in May 1989.

Permanent Address: 1255 Brennan Drive
Warminster, PA. 18974

REPORT DOCUMENTATION PAGE			Form Approved OMB No 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE September, 1990	3. REPORT TYPE AND DATES COVERED Master's Thesis		
4. TITLE AND SUBTITLE AN ASSESSMENT OF GRADUATED MOBILIZATION RESPONSE			5. FUNDING NUMBERS	
6. AUTHOR(S) Thomas A. Schneider, Captain, USAF				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Force Institute of Technology WPAFB OH 45433-6583			8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GLM/LS/ 90S-50	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This study assessed the viability of the concept of Graduated Mobilization Response (GMR). Areas of interest included: identification of key differences between GMR and previous mobilization policy; the strengths and weaknesses of GMR; the validity of GMR; impediments to the implementation of GMR; and the current status of GMR. A literature search revealed the theory of GMR, factors limiting U.S. mobilization potential, and how GMR counters those limiting factors. An extensive telephone interview was conducted with a total of 16 mobilization experts. The interview covered four topic areas: 1)The relevance of past mobilization efforts 2)The strengths and weaknesses of the current industrial base 3)The direction of future mobilization planning and 4)GMR. A large majority (87%) felt the concept of a GMR is a valid way to improve U.S. mobilization preparedness. Apparent agreement on key details has recently removed a major roadblock to continuing development. The successful integration of GMR into mobilization planning will be commensurate with the priority mobilization is given in the national deterrent/response strategy.				
14. SUBJECT TERMS Mobilization, Industrial Mobilization, Industries, War Production, Industrial Production			15. NUMBER OF PAGES 213	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	